Office Supreme Court, U. S.
FILED
JUN 1 1926
WM. R. STANSBURY
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1925.

Number 25 Original in Equity. [redacted] 10

STATE OF MICHIGAN,
Complainant,

vs.

THE STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,
Defendants.

JOINT AND SEVERAL ANSWER OF DEFENDANTS, THE STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO, TO THE BILL OF COMPLAINT.

THE STATE OF ILLINOIS,
By OSCAR E. CARLSTROM,
Attorney General,
CYRUS E. DIETZ and
HUGH S. JOHNSON,
Solicitors for Defendant, State of Illinois.

THE SANITARY DISTRICT OF CHICAGO,
By HECTOR A. BROUILLET,
Attorney,
MORTON S. CRESSY,
Assistant Attorney,
Solicitors for Defendant,
The Sanitary District of Chicago.

BARNARD & MILLER PRINT, CHICAGO

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Defendants.

JOINT AND SEVERAL ANSWER OF DEFENDANTS, THE STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO, TO THE BILL OF COMPLAINT.

These defendants, State of Illinois, by Oscar E. Carlstrom, Attorney General, Cyrus E. Dietz and Hugh S. Johnson, its solicitors, and The Sanitary District of Chicago, by Hector A. Brouillet, Attorney, and Morton S. Cressy, Assistant Attorney, its solicitors, reserving to themselves all right of exception to said bill of complaint, for joint and several answer thereunto alleged, aver and say as follows:

1.

These defendants admit that the State of Michigan is one of the States of the United States of America, and that it brings this action in this court as such State of

the United States of America, and they admit that the action is brought in the Supreme Court of the United States in the exercise of the original jurisdiction of said court, on the claimed ground that it is an action in equity relating to an alleged controversy between two states of the United States and also between a state of the United States and a citizen of another state. But these defendants deny that a controversy exists between the said complainant and the defendants, cognizable in this court, and over which this court has jurisdiction, but they aver that the matters and things in the said bill of complaint set forth and upon which the said complainant seeks relief, relate to the regulation of the Great Lakes System of Waterways and the channels and harbors connected therewith, including the channels and harbors located along the shores of the Great Lakes; that the said Great Lakes System of Waterways, channels and harbors connected with it, are interstate or national waters, over which the United States has and has assumed exclusive jurisdiction; that the said supposed interference with navigation in said bill of complaint alleged, upon said Great Lakes System of Waterways and harbors and channels connected with it due to the supposed acts and doings of the said defendants, or one of them, can be complained of, if at all, only by the United States, and that the United States is a necessary and indispensable party. For the reasons in this paragraph stated, these defendants do now hereby move that the said bill of complaint be dismissed.

2.

Defendants admit that the State of Illinois is one of the states of the United States of America, and the defendant The Sanitary District of Chicago, is a public

municipal corporation organized and existing under and by virtue of the laws of the State of Illinois and is a citizen of Illinois.

3.

These defendants admit that the State of Michigan has approximately 1,624 miles of shore line along Lakes Superior, Michigan, Huron, St. Clair and Erie and their connecting waterways.

These defendants admit that Lakes Superior, Michigan, Huron, St. Clair, Erie and Ontario are known as the Great Lakes and are sometimes called inland seas or oceans; that each of said lakes is connected by outlet—inlet rivers through which water flows from the upper lakes to the lower lakes. These defendants deny that in a state of nature there was provided a natural water highway extending from the upper lake (Lake Superior) to the Atlantic Ocean by way of the St. Lawrence, but on the contrary aver that the said lakes and their connecting waterways in a state of nature afforded very meagre means for water communication for useful commerce, and that there was substantially no water highway connection between Lakes Superior and Michigan-Huron or between Lakes Huron and Erie, between Erie and Ontario, between Ontario and the Atlantic Ocean and the St. Lawrence River; that the rapids of the St. Lawrence and Niagara Falls and the rapids below and the rapids of the St. Marys River, constitu[illegible] impassable barriers to navigation between said lakes, and that the shallowness of the waters of the St. Clair and Detroit Rivers made water connection for commerce between Lakes Erie and Huron in a state of nature almost impossible; that the outlet to the sea for water navigation in a state of nature was principally at the lower end of

Lake Michigan through the Chicago River, the South Branch and the West Fork thereof, Mud Lake, the Desplaines, Illinois and Mississippi Rivers; that the present facilities for navigation upon the Great Lakes and the connection between the different Great Lakes and between them and the Atlantic Ocean has been provided almost entirely through artificial means and by the United States of America within its domain and Great Britain or the Dominion of Canada within the territory of the Dominion of Canada; that in providing said facilities for waterway navigation upon the Great Lakes the United States has provided and is providing for proper waterway connection between such system of waterways and the system of waterways represented by the Mississippi River and its tributaries, and that such connection has been provided and is being maintained by way of the Chicago River, its South Branch and the West Fork of the South Branch of the Chicago River and by an artificial canal and waterway, (the Sanitary & Ship Canal of defendant District), to and through the Desplaines and Illinois Rivers; that said so-called Great Lakes system of waterways is only a part of, but an integral part of the great system of inland waterways improved, created, maintained, controlled and/or regulated by the United States of America.

4.

These defendants admit that the Great Lakes waterway lies partly within the United States of America, and partly within the Dominion of Canada, one of the states or dominions of the colonial empire of Great Britain and the continuation of that highway connecting the Great Lakes with the Atlantic Ocean through and by the St. Lawrence River, passes for a great distance wholly through the Canadian territory; that all of said water-

way lying within international waters has been opened by treaties between the United States of America and Great Britain and the Dominion of Canada, as free water so that American vessels, including the ships of citizens of complainant and the trade and commerce of its people, are secured equal rights of navigation with Canadian vessels in the many harbors, approximately 50 in number, which the Canadian government has improved for shipping on the Great Lakes, their connecting waters and the St. Lawrence River.

These defendants aver that under the treaty between Great Britain and the United States concluded May 8, 1871, proclaimed July 4, 1871, known as the Treaty of Washington, the subjects of her Britannic Majesty were accorded reciprocal rights of navigation in the waters of the United States such as the St. Clair Flats Canal and in all canals connected with the navigation of the lakes or rivers traversed by or contiguous to the boundary line between the United States and Canada, including also the free and open use of the waters of Lake Michigan, wholly within the confines of the United States, for the purposes of commerce.

But these defendants deny that said rights and benefits of navigation are of great and continuous and/or peculiar benefit to the complainant State or the people of complainant State, or the property or the shipping interest of complainant State, as alleged in paragraph 4 of said bill of complaint. But these defendants respectfully show unto the court that said rights and benefits of navigation are under the exclusive control of the United States by reason of its exclusive control over interstate commerce, and that the citizens and people of the State of Michigan, if they receive any benefits by reason of such navigation, they receive it by virtue of the fact that they are citizens of the United States, and in com-

mon with all other citizens of the United States and not by reason of the fact that they are citizens of the State of Michigan, and that the United States of America has the exclusive right to represent the people of the State of Michigan in all matters pertaining to interstate or foreign commerce. For the reason in this paragraph stated, these defendants do hereby move that the said bill of complaint be dismissed.

5.

These defendants admit that the so-called Great Lakes as physical bodies of water lie within one watershed, but these defendants deny that the so-called Great Lakes system of waterways lies within one watershed. On the contrary, defendants aver that it is a part of the system of inland waterways of the United States extending into and connecting various and sundry so-called watersheds. These defendants admit that the said so-called Great Lakes waterway, as well as all other waterways, may be improved by the United States and by the States upon the approval of those officers of the United States authorized by Congress to grant such approval. These defendants deny the allegation in paragraph 5 of said bill of complaint that such waterways may not be destroyed or impaired by State or Federal authority. On the contrary these defendants aver that the Federal Government, acting through its constituted authority and the different States with the approval of properly constituted Federal officers, may impair or destroy parts of waterways in the exercise of the power of the United States to regulate interstate commerce and control and regulate navigable waters; that beginning with upwards of a century ago the United States entered upon projects for the improvement, control and regulation of the navgable waters of the Great Lakes and their connections

with other navigable waters within the boundaries of the United States and has continuously since said time increased the extent of such control of navigation until on March 3, 1899, Congress passed an Act known as the Rivers and Harbors Appropriation Act of said date, by which Congress undertook complete control and regulation of and has ever since controlled and regulated the navigable waters of the United States, including the so-called Great Lakes waterway and the connection between said waterway and that waterway represented by the Mississippi River and its tributaries.

6.

These defendants admit that the State of Michgan was admitted to the Union of the States comprising the United States of America, in 1837, being created from a portion of the territory known as the North West Territory established by an ordinance of the Congress of the United States on July 13, 1787, from territory previously ceded to the United States by the State of Virginia upon the condition, among other things, that from said ceded territory there should be created not less than three nor more than five states; said ordinance, by Article Four thereof expressly provided:

> "The navigable water leading into the Mississippi and St. Lawrence and the carrying places between the same shall become highways and forever free as well to the inhabitants of the said territory as to the citizens of the United States and those of any other states ~~and those of any other states~~ that may be admitted into the confederacy without any taxes, imposts or duty therefor."

Said provision of said ordinance was a recognition that the people of said territory should have the same rights of free ingress and egress as were secured to the

citizens by the fourth article of the confederation between the States.

In this connection, however, these defendants aver that the said Article 4 of Ordinance of July 13, 1787, was and is subject to the power and authority granted to Congress by the Constitution of the United States to regulate commerce among the States, not only exercised at the time the said State of Michigan became a member of the Union, but also as to any regulation exercised thereafter; that prior to the said year 1837 when the said State of Michigan was admitted to the Union, the Congress of the United States had provided for and approved the construction of a canal to connect or unite the waters of Lake Michigan with those of the Illinois River, and in that connection had authorized the State of Illinois to abstract from Lake Michigan such amounts of water as should be reasonably necessary and required for the operation of said canal and the maintenance of navigation upon the Illinois River below the terminus of the proposed canal; that the United States itself had expressed through Congress the policy of so improving and maintaining the ancient waterway from Lake Michigan to and through the Illinois River; that the will of Congress was expressed by the Act of March 30, 1822, entitled "An Act to authorize the State of Illinois to open a canal through the public lands to connect the Illinois River with Lake Michigan," and also by the Act of March 2, 1827, entitled, "An Act to grant a quantity of land to the State of Illinois for the purpose of aiding in opening a canal to connect the waters of the Illinois River with those of Lake Michigan;" that said Acts of Congress are still in full force and effect and are hereinafter more particularly set forth; that on January 9, 1836, prior to the admission of the said complainant to the Union as a State, the General Assembly of Illinois,

acting under the authority and grant of said congressional acts of March 30, 1822, and March 2, 1827, passed an Act providing for the construction of and under which the Illinois and Michigan Canal, extending from the West Fork of the South Branch of the Chicago River southwesterly to Utica on the Illinois River, was constructed; that continuously since the passage of said Congressional Acts of March 30, 1822, March 2, 1827, and the construction of the Illinois and Michigan Canal, the State of Illinois, with the approval of the United States, has provided and maintained a waterway from the said Lake Michigan to and through the Illinois River, the operation of which waterway has depended at all times upon the abstraction of a large quantity of water from Lake Michigan, and does now depend upon the abstraction from Lake Michigan of approximately 8,500 cubic seconds feet of water, all of which is more particularly set forth hereinafter.

7.

These defendants admit that the State of Michigan on its admission to the Union of the States took and had the title to all of the submerged or subaqueous lands within its borders, which included the lakes, bottoms of that portion of the Great Lakes, Superior, Michigan, Huron, St. Clair and Erie, within its borders.

But these defendants aver that the said title to such submerged or subaqueous lands within the borders of said complainant State, is a bare, technical title and has no substance, and such title is subject to and is enveloped by the paramount power of Congress to control the said navigable waters in the regulation of interstate commerce; that said power of Congress is exclusive, has been and is being completely and fully exercised to the exclusion of any and all claimed rights of the States therein.

8.

These defendants deny that the State of Michigan in its proprietary capacity or in trust for its people, or its shippers, or its shipping, or its commerce, ever had, or continues now to have, a vested right in said Great Lakes waterway as a public highway or a perpetual paramount easement for highway purposes, and deny that said alleged right was, prior to the admission of said state into the Union, vested in, or held in trust for the public, by the British Crown or by the State of Virginia, or by the organized territorrial division thereof known as the North West Territory, but these defendants respectfully show unto the court that the regulation of navigation and of the so-called water highway, was, at the time of the filing of the bill of complaint herein, under the exclusive control of the Congress of the United States. For the reason stated in this paragraph defendants do hereby move that the said bill of complaint be dismissed.

9.

These defendants deny that complainant has any vested right in and to the so-called Great Lakes Waterway in any respect different from the rights afforded to the public generally through the exercise by Congress of its control over navigation; that complainant or States bordering upon said so-called Great Lakes Waterway, have any concurrent right or rights with each other in any respect different from the rights afforded to the public through the control by Congress of such waterways; that neither the complainant State nor any other State or States bordering upon the said so-called Great Lakes Waterway, is lawfully entitled to receive all the water from rivers and streams in said watershed for the pur-

pose of keeping up and maintaining the waters in said watershed as such natural highway. These defendants aver that the water from rivers and streams in said watershed finding their way into navigable waters of the United States, are subject to the complete and exclusive control of the Congress of the United States in the regulation of interstate commerce in such manner as Congress in exercise of the political functions of Government, may consider reasonably necessary for the general public welfare.

10.

These defendants admit that in the year 1889, the Legislature of the State of Illinois, enacted a statute entitled:

> "An act to create sanitary districts and remove obstructions in the Des Plaines and Illinois Rivers", approved May 29th, 1889, and published in the laws of Illinois for the year 1889 commencing at page 186; which act authorized the orginization of public corporations to be known as sanitary districts, with power, among other things, to construct, maintain and operate drainage canals or channels for the disposal of drainage and sewage,

and that Sections 23 and 24 of said act, are set forth *in haec verba* in said paragraph 10 of said bill of complaint.

11.

These defendants admit that in November and December of the year 1889, the Sanitary District of Chicago was organized under the said Act of 1889, hereinbefore referred to, and that it has since continuously existed as said Santary District under said Act of 1889, and acts amendatory thereof and supplementary thereto. These defendants admit that at the time of its organi-

zation, said defendant District consisted of a territory of about 185 square miles in area. These defendants admit that by successive acts of the Legislature of Illinois, the area of said defendant District has been increased from time to time, and that the area of said Sanitary District now comprises approximately 438 square miles, extending from the Illinois state line on the south and east to the northern boundary of Cook County on the North, with about 34 miles of frontage on Lake Michigan and comprises the entire City of Chicago and approximately 49 other cities and villages located near said City of Chicago, together with large areas of land to the south, west and north of said city.

12.

These defendants admit the allegations of paragraph 12 of said bill of complaint with reference to the construction of the main channel of the Sanitary District, except as to the time when said construction was commenced. As to such allegations defendants aver that the construction of the main channel of said Sanitary District of Chicago was commenced during the year 1890 and long prior to said 3d day of September, 1892.

13.

These defendants deny that in the construction of said canal it was at all times, or that it is now, the plan of defendants that said canal should be used as a passageway for the sewage of the territory comprising The Sanitary District of Chicago, as, and in the manner, alleged in paragraph 13 of said bill; and aver that it never was, and is not now, the intention of defendants to use said canal in any manner, or to divert the water from Lake Michigan, except as authorized or permitted by

the United States; and admits that Section 20 of the said Act of the General Assembly of 1889, by which the Sanitary District was organized, was amended in 1895 by the General Assembly of Illinois as is in said paragraph alleged, but defendants aver that without said amendment said section of said original act provided for the diversion and flow continuously through the main channel of "at least 200 cubic feet per minute for each 1,000 population of the district drained thereby," which is equivalent in amount to 20,000 cubic feet per minute for every 100,000 population, which is the specification contained in the 1895 amendment referred to in said paragraph 12.

14.

These defendants admit the allegations of paragraph 14 of said amended bill of complaint except as to the date when the main channel of the Sanitary District was opened, and avers that said main channel was opened on January 17, 1900.

15.

These defendants deny that the primary object and purpose of the Act of 1889, as alleged in said bill of complaint, was to provide a method of disposing of the sewage of the City of Chicago and contiguous territory, but admit that that was one of the objects and purposes of said act; and these defendants aver in this respect that the principal object or purpose of the said Act of 1889 was to provide for the construction of a ship canal to connect the Chicago River with the Desplaines and Illinois Rivers, and for the construction of other canals and waterways connected with it, and to provide for the quantity of water necessary for navigation upon the said

ship canal and upon the Desplaines and Illinois Rivers, and to further carry out the plan and program of the State of Illinois for the construction of a deep waterway between the Great Lakes and the Mississippi River in accordance with various acts of Congress and acts of the State of Illinis, as hereinafter more specifically set forth.

These defendants admit that by the said Act of 1889 and acts amendatory and supplementary thereto, it is the legal duty of the defendant Sanitary District of Chicago, subject to the authority and permission of the United States, to pass through said canal water at the rate of 20,000 cubic feet per minute, or 33⅓ cubic feet per second, for every 100,000 inhabitants within the territory of the defendant Sanitary District of Chicago, and that the only source from which said quantities of water may be obtained was by the diversion of water from Lake Michigan.

These defendants aver that at the time of the passage of said Act of 1889, the Congress of the United States had not passed any act or acts by which it had assumed or had sought to assume general regulation of navigable waters of the United States; that the General Assembly of Illinois, in passing said Act of 1889 providing for said diversion in the amounts required according to population of the said Sanitary District, believed that it was acting not only in pursuance of the express power granted by Congress under the Acts of Congress of March 30, 1822, and March 2, 1827, relating to the construction of the Illinois and Michigan Canal hereinafter more particularly mentioned, but also in pursuance of the power then existing in the State of Illinois to regulate its navigable waters; that the said Act of 1895 above mentioned and as heretofore alleged, did not change in any respect the intent of the Legislature of Illinois as expressed by said Act of 1889 with reference to the quantity of water ac-

cording to population of the Sanitary District of Chicago to be diverted from Lake Michigan; that upon the passage of the Rivers and Harbors Act of September 19, 1890, and The Rivers and Harbors Act of March 3, 1899, under which the Congress of the United States assumed jurisdiction to regulate generally navigable waters of the United States, the said defendant The Sanitary District of Chicago, in exercising the power and authority granted by the said Act of 1889 and acts amendatory thereof and supplementary thereto, sought to act and did act, at all times, in conjunction with and by the authority of the United States according to law.

These defendants admit that the population of the territory of the Sanitary District of Chicago according to the census of 1920, was 2,963,090, and admit that the said Act of 1889 of the General Assembly of Illinois and acts amendatory thereof and supplementary thereto, require the diversion or abstraction of water from Lake Michigan at the rate of approximately 9,876 cubic feet per second; but defendants aver that they cannot abstract or divert said quantity of water and does not intend to abstract or divert said quantity of water or any other quantity, except by and with the authority of the United States according to law.

16.

These defendants admit that subsequent to the opening of said canal, and in the year 1903, the defendant State of Illinois, by an act of its Legislature approved May 14, 1903, and published in the Laws of Illinois for the year 1903, commencing on page 113, undertook to authorize and did authorize the defendant, the Sanitary District of Chicago, to construct and operate a plant for the generation of electrical energy by hydraulic power derived from the water passing through the said canal.

The provisions of Sections 5 and 6 of said act are set forth *in haec verba* in said paragraph 16 of said bill of complaint.

17.

These defendants admit the allegations of paragraph 17 of said bill of complaint, with reference to the construction and operation of the hydroelectric power plant at Lockport, Illinois, and the capacity thereof; that the electrical energy thus generated is mainly transmitted to the City of Chicago and there sold for municipal and commercial purposes; but deny that the operations of said plant have earned for the Sanitary District of Chicago, many millions of dollars of profit over and above the cost of operating said plant, including proper allowance for depreciation and a reasonable return upon the investment therein.

18.

These defendants deny that since the completion of said hydro-electric development near the western terminus of said canal, the object and purpose of the defendant in the operation of the said canal and in the abstraction or diversion of water from Lake Michigan through the same has been and is now two-fold, to-wit: The disposition of the sewage of the defendant Sanitary District of Chicago, and the generation and sale of electrical energy as alleged in paragraph 18 of said amended Bill of Complaint. These defendants aver that the amount of water diverted from time to time has been and is reasonably necessary for the purposes of navigation and is as near as may be determined the amount provided to be diverted according to law; that at no time has the mean daily, or mean monthly, or mean yearly flow or diversion exceeded that amount; that prior to the construc-

tion of the said hydro-electric plant, the energy produced by said water as it passed from the southern terminus of the said main channel to the Desplaines river was entirely wasted and served no purpose; that the only purpose of constructing and operating said hydro-electric plant was to conserve this energy; that said energy so produced has been and is used for the purpose of lighting the streets of the City of Chicago and its suburbs, and also for lighting the boulevards and parks of the various park systems of Chicago according to law; and that the energy so used for such public purposes has been and is sold at approximately the cost of production.

19.

These defendants deny the allegations of said amended bill of complaint contained in paragraph 18 thereof in respect to the mean yearly amount of water passing through said Sanitary District Canal at its western terminus for the years 1900 to 1917, both inclusive, and deny that the statements of said bill of complaint with respect to said amounts are correct, but aver that the said mean yearly amounts of water (including drainage) passing through said Sanitary District Canal at its western terminus for said years, and in addition for the years from 1918 to 1924, both inclusive, are as follows:

Year	*Cubic Feet Per Second*
1900	2,990
1901	4,046
1902	4,302
1903	4,971
1904	4,793
1905	4,480
1906	4,473
1907	5,116
1908	6,443
1909	6,495
1910	6,833
1911	6,896
1912	6,938
1913	7,839
1914	7,815
1915	7,738
1916	8,200
1917	8,726
1918	8,826
1919	8,595
1920	8,346
1921	8,355
1922	8,858
1923	8,348
1924	9,465

that since March 3, 1925, the abstraction of water from Lake Michigan has not exceeded the amount fixed by the permit of the Secretary of War of said date, which said permit is set out in *haec verba* hereinafter.

20.

Defendants are not informed as to the amount of water naturally or in a state of nature contributed to the Great Lakes watershed through rivers and streams of the State of Illinois, and therefore ask strict proof as to the allegations as to such amount contained in paragraph 20 of said bill of complaint. These defendants deny that Defendant District is now withdrawing permanently from the Great Lakes Watershed an average of 11,700 cubic

feet of water per second, including the natural flow of the Chicago River, but aver that the amount so withdrawn does not exceed the amount fixed by the permit of the Secretary of War dated March 3, 1925, hereinafter set out.

These defendants admit that the Chicago River is reversed at substantially all times by and through the diversion of water from Lake Michigan according to law; that the water so diverted from Lake Michigan by defendant, the Sanitary District, is not returned in its natural course to the Great Lakes. Defendants deny that from time to time or at any time the abstraction or diversion of water from the Great Lakes is increased to a total of 14,200 cubic feet per second, but aver that at no time is the abstraction or diversion increased beyond the amount allowed by said permit of March 3, 1925, hereinafter set out. Defendants deny any resultant and resulting increased impairment of the levels of the Great Lakes during periods of low water or barometric pressure, increasing the hazards of navigation and causing an increased reduction of the navigable capacity of the Great Lakes, their connecting waterways, ports and harbors.

These defendants aver that the commerce described in said paragraph 20 of said Bill of Complaint is commerce carried on, over and upon navigable waters of the United States, over which Congress has assumed and has exclusive jurisdiction; that the supposed injury and damage so alleged in said Bill of Complaint, concerns and relates to interference with navigable waters of which the said complainant has no right or jurisdiction to complain, and therefore this defendant moves that the said allegations in paragraph 20 of this Bill of Complaint be stricken, and that the said Bill of Complaint as to such allegations be dismissed.

21.

These defendants admit that the Chicago River is a navigable stream within the Great Lakes watershed; that the Chicago River contributed in its natural state, some water per second into the waters of the Great Lakes, but the exact amount of such contribution in its natural state defendants are not informed and ask strict proof thereof. These defendants show that subsequent to the opening of the Illinois and Michigan Canal, about the year 1848, until the year 1871, a certain quantity of water was diverted through said canal from the Chicago River and Lake Michigan to the Desplaines and Illinois River; that about the year 1871 the said Illinois and Michigan Canal was completed upon what is known as the Deep Cut Plan, whereby a greater quantity of water was diverted through said canal, whereby the Chicago River flow was reversed substantially at all times, except approximately thirty days during each year when at flood times the Chicago River flowed into Lake Michigan; that such condition existed until about the year 1884, when pumps were installed at Bridgeport, the northern terminus of the Illinois and Michigan Canal, whereby through the operations of said pumps a larger quantity of water was diverted from the Chicago River and Lake Michigan through said canal to the Desplaines and Illinois Rivers; that such condition existed until the opening of the Sanitary and Ship Canal on the 17th of January, 1900; that from that date the Chicago River has substantially at all times, including flood times, been reversed and has not flowed and does not flow into Lake Michigan. These defendants deny that the complainant State or its people or its trade and commerce, ships or shipping, had or have any vested right for the purposes of navigation or a paramount easement for highway purposes in the use

of the Chicago River. These defendants aver that the said diversions of water from the Chicago River and Lake Michigan as above set forth, were made pursuant to the authority of the United States, and that all diversions now taking place are pursuant to such authority; and these defendants deny that the complainant State of Michigan either in its proprietary capacity or in its quasi-sovereign capacity, has had, or otherwise had or has, any riparian rights in the natural flow of the said Chicago River; these defendants admit that defendant District has wholly diverted the flow of said Chicago River from said Great Lakes watershed, but deny that it has appropriated said Chicago River to its own use in the operation of a sewage disposal canal, or the production of hydro electric power, and deny that the diversion of said Chicago River has been diverted to the entire destruction of all riparian rights of the complainant State of Michigan, or of its people, or the navigation rights of all interests navigating the Great Lakes, as alleged in paragraph 20 of said Bill of Complaint, but defendants respectfully show unto the Court that the diversion of water of the Chicago River, as well as the diversion of water of the Great Lakes, has not and will not injure, to any extent, the riparian rights, (if any such rights there be), or any other rights of complainant, of its people, or of interests navigating the Great Lakes, and said diversion has been, and is, by and with the authority of the Secretary of War, in accordance with the provisions of the Federal Act of Congress of March 3, 1899, and that as to all matters and things complained of in said paragraph 21, the said United States of America has the exclusive control, and that the supposed injury and damage so alleged in said Bill of Complaint, concerns and relates to interference with the navigable waters of which the said

complainant either in its proprietary capacity, or quasi-sovereign capacity, or otherwise, has no right or jurisdiction to complain, and therefore defendants move that said allegations in paragraph 21 of said Bill of Complaint be stricken, and that the said Bill of Complaint as to such allegations be dismissed.

22.

These defendants admit that all the water diverted from Lake Michigan through and by means of the Sanitary District channel, is carried into the Mississippi Valley; that said water is permanently abstracted from the Great Lakes system, but deny that, as the result of such diversion, the mean level of the water in Lakes Michigan, Huron, Erie and Ontario, and in the various waterways connecting said lakes, and in the St. Lawrence River above tidewater, has been lowered six inches below the level that would exist in said lakes and waterways in the absence of such diversion. This defendant Sanitary District avers that the lowering of the surface elevation of the waters of said lakes and their connecting channels as a result of said abstraction or diversion or diversions as authorized by said permit of March 3, 1925, does not and will not exceed four and three-quarters inches on any of said lakes or waterways; and this defendant avers that it does not intend to divert any amount of water in excess of that authorized by the United States.

As to the allegations of said paragraph 22 of said bill of complaint concerning the alleged effect upon the surface elevations of the waters of the Great Lakes by the diversion of water through the defendant Sanitary District's channel, this defendant the State of Illinois separately and particularly denies that as a result of said diversion the mean level of the waters in Lakes Michigan-

Huron, Erie and Ontario and the various waterways connecting said lakes and in the St. Lawrence River above tidewater, has been lowered six inches or to any extent below the level that would exist in said lakes and waterways in the absence of such diversion.

23.

Defendants are not informed that there is a or any unexplained reduction in the amount of water in the Great Lakes Basin or in the Great Lakes, and are therefore not informed as to whether deforestation has any effect upon the amount of water finding its way into all or the different Great Lakes or into the Great Lakes Basin, and therefore asks strict proof thereof. These defendants aver that they are informed and believe and upon such information so state the fact to be, that there is a fixed relation between the amount of water in the Great Lakes or in the different Great Lakes and the amount of rainfall or precipitation upon the lake surfaces and the drainage areas of the different Great Lakes; that there are so-called periods of low supply and also so-called periods of abundant supply of water; that the supply of water to the Great Lakes Basin and to the Great Lakes depends upon the amount of such precipitation; that the surface elevations of the waters of the different Great Lakes vary from year to year and are observed to run in cycles; that there is a direct relation between the surface elevations of the waters of the Great Lakes and the amount of precipitation during each year or during a period of years; that during certain years or during certain periods of years, due to weather conditions a greater percentage of the rainfall or precipitation upon the drainage areas finds its way through the rivers and streams of such drainage areas to the Great Lakes than finds its way during other years or other periods of

years; that at the present time, due to lack of rainfall upon the drainage areas and upon the surface elevations of the Great Lakes and also to conditions of run-off, and due solely to such conditions, the surface elevations of all the Great Lakes, including Lake Superior (not in any way affected by the Chicago diversion) are low, but not substantially, if any, lower than the surface elevations of the lakes were at other times prior to the construction and operation of the Sanitary and Ship Canal and prior to the time when any considerable amount of deforestation took place; that the hydrographs issued by the Lake Survey of the United States showing the elevations of the different Great Lakes for almost a century, show approximately ten year cycles for the rise and fall of the lake surfaces due to rainfall or precipitation supply; that the surface elevations of the waters of the different Great Lakes bear a certain relation to each other; that is, the surface elevations of Lakes Michigan-Huron are generally a certain number of feet higher than the surface elevation of the water of Erie, and the same applies to Superior in comparison with Lakes Michigan-Huron and the surface elevations of the waters of Lake St. Clair as compared with the surface elevations of the waters of the lakes above and below, and a similar relation exists between the surface elevation of Erie and Ontario.

These defendants deny that there has been created large shoal areas other than that it is natural for such shoal areas to be created, or that there has been or will be any increasing hazard of open water navigation, or any destruction and retirement of the present commercial carriers of the Great Lakes, as alleged in paragraph 23 of said Bill of Complaint; but these defendants show that the channels and shoal areas of the Great Lakes have been platted by the Engineer Corps of the War

Department of the United States, and that the connecting channels and harbors situated within the complainant State, as well as within other States bordering upon the Great Lakes, have been dredged by the United States Government, and that it is by reason of such improvement by the United States that the present carriers of modern commerce are able to navigate them. These defendants deny that the complainant State of Michigan, or its people, or its industries, have any right to complain for the reason that the improvement and regulation of navigation is within the exclusive power of the Congress of the United States, and over which Congress has assumed and has exclusive jurisdiction, and the supposed injury and damage so alleged in said Bill of Complaint, concerns and relates to the interference with navigable waters of which the said complainant has no right or jurisdiction to complain, and therefore defendants move that the said allegations in paragraph 23 of said Bill of Complaint be stricken, and that the said Bill of Complaint as to such allegations be dismissed.

24.

These defendants deny the allegation of said Bill of Complaint to the effect that neither the Congress of the United States or any other Federal Agency or authority, or the Legislature of the State of Illinois, or any agency of that or any other state, has the authority to abstract from the Great Lakes basin, any water into any other natural or artificial watershed, and defendants deny that the purpose of such abstraction or diversion of water was for the purpose of operating, maintaining and flushing an open sewer maintained in violation of modern standards of sanitation. These defendants deny that the power of the Congress of the United States is expressly restricted to the control of the waterways

of the Great Lakes as a navigable waterway under the powers vested in it by the commerce clause of the Constitution of the United States. These defendants respectfully show unto the Court that the United States of America is not made a party to this Bill of Complaint, and therefore move that all allegations in paragraph 24 of the said Bill of Complaint be stricken and that the said Bill of Complaint as to such allegations be dismissed.

25.

These defendants deny the allegation of said bill to the effect that there is no authority in the Government of the United States or of any of the States, or of any of their agencies, authorizing the changing of the natural course of the Chicago River, and these defendants deny that there is any unlawful alteration, reversal or change in said Chicago River and deny that the diversion of the Chicago River is against the rights of the complainant, but these defendants show that the allegations contained in paragraph 25, concern and relate to control of the navigable waters about which the said complainant has no right or jurisdiction to complain, and therefore defendants move that the said allegations of paragraph 25 of said Bill of Complaint be stricken, and said Bill of Complaint as to such allegations be dismissed.

26.

These defendants deny that the alleged lowering of the levels of the Great Lakes which are interrelated and interdependent, particularly lakes Michigan and Huron, which are in fact but one lake, the body of water connecting them being approximately 4 miles in width, has seriously diminished the navigability or navigable capacity of said Great Lakes, their ports, and harbors, or has caused a resultant or any impairment or partial or any destruc-

tion of the great natural highway, as alleged in paragraph 26 of said Bill of Complaint. These defendants admit that on said lakes there is a great commerce, domestic and foreign, and many freight and passenger ships operate on all of said lakes and waterways between the State of Michigan and the other States adjacent thereto and to and with other States and countries, and defendants admit that in addition thereto, there are great ships particularly of a type peculiar to the Great Lakes, and known as bulk freighters and having an enormous carrying capacity and capable of operation at very low freight rates when loaded to maximum capacity, carrying from the great wheat producing areas of the American Northwest (which, however, defendants respectfully show unto the Court is no part of the State of Michigan, complainant herein) the grain there produced to lower lake ports and to the ocean (which lower lake ports defendants respectfully show unto the Court, are not situated within the State of Michigan) and that said bulk freighters also carry from the large mineral territories of Northern Michigan and Minnesota and Canada, large mineral deposits, particularly of iron and copper ore, to the industrial districts of the United States, and particularly of Illinois, Ohio, Indiana, Pennsylvania and New York. But defendants are not advised as to whether the said ore is carried to the industrial districts of the Province of Ontario in the Dominion of Canada, or to the industrial districts of the State of Michigan, but pray strict proof of said allegations so far as the same may be material. Defendants admit that every inch of the normal draft of said vessels which they are unable to utilize, reduces the cargo carrying capacity by a number of tons, provided the draft of such vessels is greater than the depth of water in the harbors or other waters sought to be navigated by them. Defendants

aver that the diversion of water from the Great Lakes by means of the Sanitary District works has not in any way affected the draft which vessels entering said ports are able to utilize and that their cargo carrying capacity has not been, and is not, reduced because of any such diversion. Defendants further aver that the commerce described in paragraph 26 of said Bill of Complaint, is interstate commerce and is carried on, over and upon those navigable waters of the United States, over which the United States has, and has assumed, exclusive jurisdiction, and that the complainant herein has no right to complain of any supposed interference with said navigable waters of the United States. Defendants further aver that all of said harbors or ports described in said Bill of Complaint require, for their maintenance, constant dredging each year under normal conditions, and any dredging made necessary by virtue of any supposed effect of said diversion upon said ports or harbors would be and is negligible and of no consequence, and defendants aver that all of said harbors have been dredged and the channels improved by the United States Government since the opening of said Sanitary District channel and such dredging operations have been made under the supervision and direction of the United States and at the cost of the United States; and have been made upon the basis of the withdrawal of 10,000 cubic feet of water per second at Chicago; and that, therefore, the withdrawal of water at Chicago, has not had any effect upon the navigable depth of water in said harbors or in said connecting channels. Defendants aver that the commerce described in paragraph 26 of said Bill of Complaint, is commerce carried on over and upon the navigable waters of the United States, over which Congress has assumed and has exclusive jurisdiction; that the supposed injury and damage so alleged in said Bill of Complaint, concerns and relates to interfer-

ence with navigable waters of which the said complainant has no right or jurisdiction to complain, and therefore defendants move that the said allegations in paragraph 26 of said Bill of Complaint be stricken, and that the said Bill of Complaint as to such allegations be dismissed.

27.

These defendants deny that the State of Michigan in its proprietary capacity or in its quasi-sovereign capacity is injured by the alleged impairment of alleged riparian rights, if any such rights exist, in that portion of Lakes Superior, Michigan, Huron, St. Clair and Erie and their connecting waterways lying within its boundaries, and deny that there is any impairment of riparian or any other rights of said complainant State of Michigan resulting from the impairment and lowering of the levels of the Great Lakes consequent upon the diversion of the waters from the Great Lakes and their watershed by these defendants. Defendants respectfully show unto the Court, that the diversion of water at Chicago could have and has had, no effect whatever upon the level of Lake Superior.

28.

These defendants deny that the State of Michigan in its quasi-sovereign, or in any other capacity, has constantly sustained great, irreparable or any injury through any loss to its people, its trade, commerce, or shipping, or to owners of riparian rights in the Great Lakes and their connecting waterways, due to the lowering of the levels of the Great Lakes consequent upon the diversion of water from the Great Lakes by these defendants.

These defendants admit that a great number of citizens within the borders of complainant own riparian

rights in the Great Lakes and their connecting waterways, of a value of a large amount of money, but defendants are not advised as to the extent of the value of such riparian rights, and therefore ask strict proof as to such value. Defendants deny that the value of said riparian rights is largely or to any extent dependent for their usefulness and value upon the maintenance of the levels of the Great Lakes. Defendants aver that it may be that the value of such riparian rights is largely dependent upon the maintenance of navigation facilities by the United States necessary for the demands of commerce upon such navigable waters. These defendants deny that the alleged impairment and lowering of the lake levels of said Great Lakes is destructive of riparian rights of citizens of complainant located within its borders, and that there has been or is any destruction incidental or otherwise to the value of docks, wharves, ship yards, boat-houses, warehouses and landing places. In this connection defendants aver that the riparian rights and the value of riparian rights of the citizens of Michigan is entirely dependent and subordinate to the control of navigable waters of the United States by Congress; that the State of Michigan has no right, authority or power to complain of the destruction or impairment of any such rights. Defendants deny that the said riparian rights or the value of said riparian rights of any of the citizens of the State of Michigan have been destroyed or in any manner affected by the interests of sewage disposal or hydro-electric power needs or desires or pretended or other economies of the defendant Sanitary District; that if there has been any impairment of such riparian rights or the value of such riparian rights of citizens of said complainant, it has been entirely through and by virtue of the exercise by the United States of its control of navigable waters.

29.

These defendants are not advised as to whether large numbers of citizens of the State of Michigan own interests in ships and ship yards within its borders, save by the allegation contained in said Bill of Complaint, but pray strict proof thereof so far as said allegations may be material, but these defendants deny that said ships or ship yards are being injured by the diversion and abstraction of water from the Great Lakes by these defendants, and deny that there is a consequent decrease in the navigable capacity of the Great Lakes or the navigable capacity of the ports and harbors of the Great Lakes. These defendants admit that the ports and harbors of the Great Lakes have been improved at a great expense by the Government of the United States, and that the ports and harbors of Canada have been improved by the Dominion of Canada, as alleged in paragraph 29 of the said Bill of Complaint, but deny that there has been any great or irreparable loss, or any loss to the complainant, or its people, or its trade or commerce.

30.

These defendants deny that the complainant in its proprietary capacity, or in any other capacity, has title to vast quantities or to any fish found in the Great Lakes, and on the contrary aver that the right of fishing in the Great Lakes navigable waters of the United States is a right common to the citizens of the United States, and such right does not belong to the citizens of any particular state.

These defendants are not advised, save by the allegations contained in said Bill of Complaint, as to the amount of the fish industry of the State of Michigan, and its people, as alleged in paragraph 30 of said Bill of Complaint,

and defendants pray strict proof so far as the same may be material, but defendants deny that the said diversion of water has had, or will have, any effect upon the alleged fish industry, or will cause any injury to the complainant state or its people.

31.

These defendants deny that said acts in diverting water from the Great Lakes are in violation of the legal rights of complainant and the people of the State of Michigan, as alleged in paragraph 31 of the said Bill of Complaint.

(a) These defendants deny that by said alleged acts, or by any other acts, are they, or either of them, interfering with the common law or vested right or paramount easement of highway, if any such right or rights exist, of the State of Michigan or its people, or of the public generally, to have the free and unobstructed use of the Great Lakes waterway within and without the borders of the State of Michigan, for purposes of navigation, trade and commerce or for any other purpose, free from any and all interference with the present and prospective natural navigable capacity of the said waterway, and its usefulness as a public highway. These defendants respectfully show unto the Court that the said ports and harbors within the State of Michigan have been improved by the United States Government over their natural navigable capacity, and have been made more navigable than they were in a state of nature, and that the regulation of such harbors and ports and the use of the Great Lakes waterway is under the exclusive jurisdiction of the Congress of the United States, concerning which this complainant has no right or jurisdiction to complain.

(b) These defendants deny that by any acts mentioned in the said Bill of Complaint or by any other acts, have

they interfered with the right, if any such right be, of the people of the State of Michigan, or of the people generally, to the free and unobstructed navigation of Lakes Superior, Michigan, Huron, St. Clair, Erie and Ontario, and the navigable waters between said lakes, and from said lakes into the Atlantic Ocean, which rights, if any there be, belong to the said people of the State of Michigan by the common law or by guarantee, if there be any common law right, or if there be any guarantee contained in the ordinance for the government of the territory of the United States northwest of the Ohio River, enacted by Congress on June 13, 1787, but defendants do not admit that the ordinance of June 13, 1787, constitutes such a contract between the Government of the United States and the several states, as to prevent the United States from issuing the permits issued by the Secretary of War, to this defendant, or for the improvement of the navigable waters of the United States, and they aver that the withdrawal and diversion of water, as authorized by the Secretary of War on the date of March 3, 1925, and the regulation of the navigable waters of the United States are under the exclusive jurisdiction of the Congress of the United States, concerning which the Complainant has no right to complain.

(c) These defendants deny that said alleged acts constitute any present or any increasing burden upon either intrastate or interstate commerce, and deny that it is impairing or destroying a natural highway used and useful in interstate commerce.

(d) These defendants deny that said act of diverting water from the Great Lakes is impairing the capacity of the said lakes, or is destructive of the fisheries thereof, or the riparian rights or shipping and commercial rights of the citizens of the Complainant State, on or in said Great Lakes or their connecting waterways, and they are not

advised as to the allegations contained in sub-paragraph d of said paragraph 31 of said Bill of Complaint, as to the fishing industry, but defendants deny that said alleged acts have injured or will injure said fishing industry of the citizens of Complainant State. Defendants aver that whatever rights in fish, rights of fishing or whatever fishing industries there may be in the said complainant state or the citizens thereof, so far as said Great Lakes are concerned, are subject to the control of navigation by the United States.

(e) Defendants show that under the Act of Congress of the United State September 19, 1890, entitled "An Act making appropriations for the construction, repair and preservation of certain public works on Rivers and Harbors, and for other purposes" (26 U. S. Stat., at L. 426), the United States undertook certain control and regulation of all navigable waters of the United States; that thereafter Congress of the United States, on March 3, 1899, passed an act entitled "An Act making appropriations for the construction, repair and preservation of certain public works on rivers and harbors, and for other purposes" (30 U. S. Stat., at L. 1121); that under said act, particularly Sections 3 to 20, both inclusive, the Congress of the United States undertook complete and full regulation and control of all navigable waters; that Section 10 of said act is as follows:

> "Sec. 10. That the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers

and authorized by the Secretary of War; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or inclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same."

That said Act of Congress of March 3, 1899, invests the Secretary of War, upon the recommendation of the Chief of Engineers, with authority to fix and control the amount of the said diversion of water from Lake Michigan; that under said act the Congress of the United States has exercised and is exercising control of such diversion; that the Secretary of War, upon the recommendation of the Chief of Engineers, under said act has exercised and is exercising the control and regulation of the amount and manner of said diversion and abstraction of water from Lake Michigan; that the Secretary of War, upon the recommendation of the Chief of Engineers, has issued from time to time various permits authorizing, empowering and approving the diversion of various quantities of water from Lake Michigan at Chicago through said Sanitary and Ship Canal of defendant; that on or about March 3, 1925, the Secretary of War, upon the recommendation of the Chief of Engineers of the United States Army, issued a permit to this defendant regarding the amount, manner and the conditions of said diversion, which permit is in words and figures as follows, to-wit:

"WHEREAS, By Section 10 of an Act of Congress, approved March 3, 1899, entitled 'An Act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes,' it is provided that it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any

port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of War; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition or capacity of any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or inclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same;

AND WHEREAS, Application has been made to the Secretary of War by *The Sanitary District of Chicago, Illinois,* for authority to divert an annual average of 10,000 cubic feet of water per second from Lake Michigan through the channels of said Sanitary District;

AND WHEREAS, In the judgment of the Secretary of War, an annual average diversion of more than 8,500 cubic feet per second should not now be permitted;

NOW, THEREFORE, This is to certify that, upon the recommendation of the Chief of Engineers, the Secretary of War, under the provisions of the aforesaid statute, hereby authorizes the said Sanitary District of Chicago to divert from Lake Michigan, through its main drainage canal and auxiliary channels, an amount of water not to exceed an annual average of 8,500 cubic feet per second, the instantaneous maximum not to exceed 11,000 cubic feet per second, upon the following conditions:

1. That there shall be no unreasonable interference with navigation by the work herein authorized.

2. That if inspections or any other operations by the United States are necessary in the interests of navigation, all expenses connected therewith shall be borne by the permittee.

3. That no attempt shall be made by the permittee, or the owner, to forbid the full and free use by the public of any navigable waters of the United States.

4. That the Sanitary District of Chicago shall

carry out a program of sewage treatment by artificial processes which will provide the equivalent of the complete (100%) treatment of the sewage of a human population of at least 1,200,000 before the expiration of the permit.

5. That the Sanitary District shall pay its share of the cost of regulating or compensating works to restore the levels or compensate for the lowering of the Great Lakes system, if and when constructed, and post a guarantee in the way of a bond or certified check in the amount of $1,000,000 as an evidence of its good faith in this matter.

6. That the Sanitary District shall submit for the approval of the Chief of Engineers and the Secretary of War plans for controlling works to prevent the discharge of the Chicago River into Lake Michigan in times of heavy storms. These works shall be constructed in accordance with the approved plans and shall be completed and ready for operation by July 1, 1929.

7. That the execution of the sewage treatment program and the diversion of water from Lake Michigan shall be under the supervision of the United States District Engineer at Chicago, and the diversion of water from Lake Michigan shall be under his direct control in times of flood on the Illinois and Desplaines Rivers.

8. That if, within six months after the issuance of this permit, the City of Chicago does not adopt a program for metering at least ninety per cent of its water service and provide for the execution of said program at the average rate of ten per cent per annum, thereafter this permit may be revoked without notice.

9. That if, in the judgment of the Chief Engineers and the Secretary of War, sufficient progress has not been made by the end of each calendar year in the program of sewage treatment prescribed herein so as to insure full compliance with the provisions of condition 4, this permit may be revoked without notice.

10. That this permit is revocable at the will of the Secretary of War, and is subject to such action as may be taken by Congress.

11. That this permit, if not previously revoked

or specifically extended, shall cease and be null and void on December 31, 1929.

WITNESS my hand this 3rd day of March, 1925.

(Signed) H. TAYLOR,
Major General, Chief of Engineers.

WITNESS my hand this 3rd day of March, 1925.

JOHN W. WEEKS,
Secretary of War."

That the said permit has been since its issuance and still is in full force and effect; that the said permit has never been revoked by the Secretary of War or by any other person authorized to revoke same; that defendant, the Sanitary District, has complied with, fulfilled and performed each and every of the conditions, requirements and obligations of said permit; that each and every of the conditions of said permit has been met and complied with; that the defendant District has not diverted or abstracted from Lake Michigan any water in excess of the amount fixed by said permit, and that the defendant, the Sanitary District, in diverting said water has so diverted and abstracted same from Lake Michigan in the manner and under the conditions provided by said permit.

(e) These defendants aver that the allegations contained in paragraph 31 and in sub-paragraph a, b, c, and d, of said paragraph 31, relate to the regulation and control of the navigable waters of the United States, over which congress had assumed or has, the exclusive jurisdiction; but the supposed injury and damage so alleged in said paragraph of the said Bill of Complaint concern and relate to the control of said navigable waters of which the said complainant has no right or jurisdiction to complain, and therefore defendants move that the said allegations contained in said paragraph 31 and said sub-paragraphs a, b, c, and 4, of said paragraph 31 of said Bill of Complaint be stricken, and

that said Bill of Complaint as to such allegations be dismissed.

32.

These defendants deny that the acts of defendants, or either of them, have caused, are now causing, or will continue to cause, serious or any interference with the trade and commerce of the people of the State of Michigan in their commerce and among themselves, with neighboring states or the world, or in its proprietary capacity, and deny that either the people of the Complainant State, or the said Complainant State, have had, or will have, any pecuniary loss or losses, and defendants deny that the Complainant State of Michigan has any right to bring this Bill of Complaint, either on behalf of itself or in its proprietary capacity, or on behalf of the people of the said state, for the purpose of establishing and protecting the legal rights of said state.

33.

These defendants aver:

(a) The Continental Divide separating the watershed of the Great Lakes basin and the watershed of the Mississippi River basin, passes within approximately eight miles of the shore line of Lake Michigan at Chicago. Said Continental Divide at the point mentioned is insignificant and its summit is but a few feet above the mean surface elevation of Lake Michigan. Originally, in a state of nature, the West Fork of the South Branch of the Chicago River emptied into the South Branch of said Chicago River. Said South Branch in confluence with the North Branch formed the Chicago River. The West Fork of the South Branch passed within a short distance of the Desplaines River, and it in

confluence with the Kankakee River forms the Illinois River which flows through a large and fertile valley and empties into the Mississippi. Originally at times the waters of the West Fork of the South Branch of the Chicago River flowed across the said Continental Divide and into the Desplaines River and mingled with the waters thereof. Prior to the admission of the State of Illinois into the Union in 1818, and subsequent thereto, said Lake Michigan, Chicago River, South Branch thereof and the West Fork of the South Branch, a small portage in dry weather times of the year across said Continental Divide, and said Desplaines and Illinois Rivers were navigated by the early explorers, fur traders and others, and formed a continuous line of water navigation accommodating a large and extensive commerce. In wet times or times of high water, the connection in said water route between the West Fork of the South Branch of the Chicago River and said Desplaines River, was made through an expanse of water known as Mud or Portage Lake, and at such times boats passed to and from the Desplaines to the West Fork of the South Branch, entirely by water.

(b) The above mentioned water route between the Great Lakes and the Mississippi River and its connection with the Great Mississippi River Navigation System extending to the Gulf of Mexico, early determined the policy of the United States Government with reference to the division of the Northwest Territory. The cession of Virginia of 1783 provided that the Northwest Territory should be divided into states of not less than 100 square miles and not more than 150 square miles in area. A report made to and adopted by Congress, dated March 24, 1786, recommended the division to conform to the possibilities of navigation routes in the Northwest Territory, and among other things stated:

"Whereas it appears * * * that the laying it out and forming it into states of the extent mentioned in the resolution of Congress of the tenth of October, 1780, and in one of the conditions contained in the cession of Virginia, will be productive of many and great inconveniences; that by such a division of the country, some of the new states will be deprived of the advantages of navigation, some will be improperly intersected by lakes, rivers and mountains, and some will contain too great a proportion of barren, unimproved land, and of consequence will not for many years if ever have sufficient number of inhabitants to form a respectable government, and entitle them to a seat and voice in the federal council: And whereas in fixing the limits and dimensions of the new states, due attention ought to be paid to natural boundaries and a variety of circumstances which will be pointed out by a more perfect knowledge of the country, so as to provide for the future growth and prosperity of each state, as well as for the accommodation and security of the first adventurers."

Pursuant to said report, article 5 of the Ordinance of 1787 was made to provide that the said Northwest Territory should be divided into not less than three nor more than five states, and that the northern boundary of three of said states might be fixed by Congress to be a line drawn through the southern bend or extreme of Lake Michigan, and that the territory north might be divided into one or two states, and, further, in contemplation of the importance of navigation, article 4 was by Congress made to provide

"the navigable waters leading into the Mississippi and St. Lawrence and the carrying places between them, shall be common highways and forever free as well to the inhabitants of the said territory as to the citizens of the United States and those of any other states that may be admitted into the Confederacy, without any tax, impost or duty therefor."

The State of Virginia on December 30, 1788, ratified the said Ordinance of 1787. The Illinois Territory prior to the passage by Congress of the Enabling Act, only extended north to an east and west line drawn through the southern end of Lake Michigan. On April 3, 1818, when this Enabling Act was being considered by the House of Representatives in Committee of the Whole, the said act was amended, defining the boundaries of Illinois Territory, or of the new state, to be the boundaries as they exist today, and Mr. Pope in support of said amendment, among other things said (as shown by the proceedings of Congress):

> "The object of this amendment, Mr. P. said, was to gain, for the proposed State a coast on Lake Michigan. This would afford additional security to the perpetuity of the Union, inasmuch as the State would thereby be connected with the States of Indiana, Ohio, Pennsylvania and New York, through the Lakes. The facility of opening a canal between Lake Michigin and the Illinois River, said Mr. P., is acknowledged by every one who has visited the place, giving to the proposed State the port of Chicago (embraced in the proposed limits), will draw its attention to the opening of communication between the Illinois River and that place, and the improvement of that harbor."

(c) Shortly after Illinois became a State of the Union, a report was made by Graham and Phillips of April 4, 1819, and by Major Stephen H. Long, and transmitted to Congress by John C. Calhoun, Secretary of War, December 28, 1819, describing said water route from Lake Michigan to the Illinois River and recommending its improvement. The necessity of the improvement of said water route was further emphasized by the refusal of Great Britain to permit the citizens of the United States the free navigation of the St. Lawrence River, and the controversy as to the navigation of the

St. Lawrence River extended from about the year 1822 until about the year 1854, when by treaty the privilege only was granted to the citizens of the United States. Consequently, on March 30, 1822, to authorize the construction of a canal to connect Lake Michigan with the Illinois River, Congress passed the following act:

"An Act to Authorize the State of Illinois to Open a Canal Through the Public Lands to Connect the Illinois River with Lake Michigan. (Approved and in force March 30, 1822.)

Section 1. Be it enacted by the Senate and the House of Representatives of the United States of America, in Congress Assembled: That the State of Illinois be, and is hereby authorized to survey and mark, through the public lands of the United States, the route of the canal connecting the Illinois River with the southern bend of Lake Michigan; and ninety feet of land on each side of said canal shall be forever reserved from any sale to be made by the United States, except in the cases hereinafter provided for, and the use thereof forever shall be, and the same is hereby vested in the said State for a canal, and for no other purpose whatever; on condition, however, that if the said State does not survey and direct by law said canal to be opened, and return a complete map thereof to the treasury department, within three years from and after the passage of this act; or, if the said canal be not completed, suitable for navigation within twelve years thereafter; or, if said ground shall ever cease to be occupied by, and used for, a canal suitable for navigation; the reservation and grant hereby shall be void and of none effect; Provided, always, and it is hereby enacted and declared, that nothing in this act contained, or that shall be done in pursuance thereof, shall be deemed or construed to imply any obligation on the part of the United States to appropriate any money to defray the expenses of surveying or opening said canal; Provided, also, and it is hereby further enacted and declared, that the said canal, when completed, shall be and forever remain a public highway for the use

of the Government of the United States, free from any toll or other charge whatever, for any property of the United States, or persons in their service passing through the same."

On or about January 20, 1825, Edward Coles, as Governor of Illinois, transmitted to James Monroe as President of the United States, a complete map showing the survey made by the State of Illinois for the location of the canal provided by said act. The letter accompanying the delivery of said map to the President of the United States, is in part as follows:

"In compliance with request of the Legislature of this State, I have the honor to transmit to you a copy of the 'Report of the Canal Commissioners of the State of Illinois,' together with a map of the country between the headwaters of the Illinois River and Lake Michigan on which is delineated the proposed canal to connect these navigable waters."

The General Assembly of the State of Illinois had theretofore provided by law for the making of said survey by the Canal Commissioners and for the opening of said canal, and had within the three years provided by said act, performed all things required of it, and the said Act of March 30, 1822, has been since its passage and is now in full force and effect. The importance of constructing said canal was further called to the attention of Congress in a memorial by the General Assembly of Illinois in the year 1826, which, among other things, asked the United States to aid the State of Illinois to build said canal. Consequently, on March 2, 1827, for such purposes, the Congress of the United States passed an act, the title of which and the act are as follows:

"An Act to grant a quantity of land to the State of Illinois for the purpose of aiding in opening a canal to connect the waters of the Illinois River with those of Lake Michigan. (Approved and in force March 2, 1827.)

Section 1. Be it enacted by the Senate and House of Representatives of the United States of America, in Congress Assembled, That there be and hereby is granted to the State of Illinois, for the purpose of aiding the said State in opening a canal to unite the waters of the Illinois River with those of Lake Michigan, a quantity of land equal to one-half of five sections in width, on each side of said canal, and reserving each alternate section to the United States, to be selected by the Commissioner of the Land Office, under the direction of the President of the United States, from one end of the said canal to the other; and the said land shall be subject to the disposal of the Legislature of the said State, for the purpose aforesaid, and no other; *Provided, That the said canal when completed, shall be and forever remain a public highway for the use of the Government of the United States, free from any toll, or other charge, whatever, for any property of the United States, or persons in their service passing through the same;* Provided, That said canal shall be commenced within five years and completed in twenty years, or the State shall be bound to pay to the United States the amount of any lands previously sold, and that the title to purchasers under the State shall be valid."

Said act has been, since its passage, and is now, in full force and effect.

After surveys, investigation and reports made by engineers and others for the State of Illinois, on January 9, 1836, the General Assembly of Illinois passed an act providing for the construction of said canal, and under that act and certain acts amendatory thereof, the canal was finally completed in 1848. Section 16 of said act, among other things, provided:

"Sec. 16 (Description-Proviso.) The said canal shall not be less than forty-five feet wide at the surface, thirty feet at the base and of sufficient depth to insure a navigation of at least four feet, to be suitable for ordinary canal boat navigation, to

be supplied with water from Lake Michigan and such other sources as the Canal Commissioners may think proper, and to be constructed in the manner best calculated to promote the permanent interest of the country; reserving ninety feet on each side of said canal, to enlarge its capacity, whenever in the opinion of the Board of Canal Commissioners, the public good shall require it."

The original plan for the construction of said canal provided for its being so built that water for its operation would be taken from Lake Michigan by gravity through that portion of the canal which cut through the said Continental Divide. This plan was known as the Deep Cut Plan. For lack of funds, that portion of the canal between the West Fork of the South Branch of the Chicago River and the Desplaines River at or near Joliet, was completed upon what was called the Shallow Cut Plan, by which water for its operation was taken partly from said West Fork and partly by way of a feeder known as the Calumet Feeder, extending from the said canal at Sag, Illinois, about twenty miles below its northern terminus, to the Little Calumet River, at or near what is now Blue Island, Illinois.

In 1861, the General Assembly of Illinois, with the view of enlarging the entire waterway from Lake Michigan to the Mississippi River, and to supply additional water for the Illinois River to provide greater depths for navigation in said river, passed a resolution directing the Trustees of the Illinois and Michigan Canal to make a survey and report as to the best methods of improving said waterway which should be supplied with water from Lake Michigan "through the enlargement and deepening of the Illinois and Michigan Canal, or otherwise, or by opening a channel from Lake Michigan, by way of the South Branch of the Chicago River and Mud Lake to the Desplaines River, and down said canal to a point

that would secure a free, flowing, ample and never-failing supply of water, sufficient for the navigation of the Illinois River at all seasons and times." It was further provided by said resolution that the channel to be constructed should be of "sufficient size to admit of full and free steamboat navigation from the Illinois River to Chicago and Lake Michigan, as well as a size sufficient for supplying water for all the deficiencies of navigation in the Illinois River at all seasons." The said resolution contemplated either the enlargement of the Illinois and Michigan Canal in the stretch extending across the Continental Divide or the construction of an entirely new canal substantially parallel with it at such place and places to withdraw from Lake Michigan for navigation purposes a large quantity of water. This enlargement was provided for by both the Act of Congress of 1822, which reserved a strip of land 90 feet on each side of the canal, and by the Act of Illinois, under which the canal was constructed, reserving the same number of feet on each side of the canal for the purpose of enlargement. In the furtherance of this plan for the enlargement of said waterway, the General Assembly of Illinois, on February 16, 1865, passed an act providing for the enlargement of said canal between Chicago and Joliet upon the original deep cut plan. The said Act is in part as follows:

> "Whereas, it has been represented that the City of Chicago, in order to purify or cleanse Chicago River, by drawing a sufficient quantity of water from Lake Michigan, directly through it, and through the summit division of the Illinois and Michigan Canal, will advance a sufficient amount of funds to accomplish this desirable object; and, whereas, the original plan of the said canal was to cut down the summit so as to draw a supply of water for navigation directly from Lake Michigan, which plan was abandoned for the time being, after

a large part of the work had been completed, only in consequence of the inability of the State to procure funds for its further prosecution; and, whereas, under the law creating the trust the plan of the summit division of the canal was changed, the level being raised so as to require the principal supply of water to be obtained through the Calumet feeder, subject to serious contingencies, and by pumping on to the summit with the hydraulic works at Bridgeport; now, therefore,

"Section 1. Be it Enacted By the People of The State of Illinois, Represented in the General Assembly, That to secure the completion of the summit division of the Illinois and Michigan Canal, upon the original 'deep cut' plan, with such modifications and changes of line, if necessary, as will most effectually secure the thorough cleansing or purification of the Chicago River, and facilitate the execution of the work, the City of Chicago, through its constituted authorities, may at once enter into an arrangement with the Board of Trustees of said canal, with a view to the speedy accomplishment of the work."

Purusant to said Act of the General Assembly of Illinois last mentioned, the City of Chicago, pursuant to an ordinance of its City Council, passed June 5, 1865, in 1871 completed said canal on said deep cut plan, whereby water was drawn for its operation and for the purpose of reversing the Chicago River at substantially all times of the year except in flood times. About the year 1872 Chicago was reimbursed by defendant, State of Illinois, for its expenditure of about $3,000,000 to complete said canal. The Congress, by its Rivers and Harbors Act of June 23, 1866, took cognizance of the desire and joined in the plan of the General Assembly of Illinois to enlarge said waterway—and the necessity therefor—by directing a survey to be made. Thereupon, on February 12, 1867, a report was made by the Engineer Corps of the United States Army known as the Report

of General Wilson, which report was transmitted to Congress, concerning the improvement of this waterway. The report describes the waterway. Among other things, the said report stated:

> "* * * The data herein contained, together with the existence of a canal of limited capacity already in operation, demonstrate beyond a doubt that the waters of the lake may be carried into the Illinois River through a navigable channel of any required dimensions, and at a cost which cannot be regarded as excessive when the objects to be obtained are duly considered."

After the said Illinois and Michigan Canal had been completed by the City of Chicago upon the deep cut plan, a report was made on January 9, 1875, by Assistant Engineer F. C. Doran, which report was transmitted to Congress, and it recited the completion of said canal upon the deep cut plan. This report was followed on May 10, 1880, by a report made by General Lydecker pursuant to the Rivers and Harbors Act of March 3, 1879, which said Lydecker report was submitted to Congress. Among other things, the said report stated:

> "The question of a through line of water communication from the Mississippi to Lake Michigan, via the Illinois River, has been before Congress since an early date. In 1822, the State of Illinois was authorized to make through the public lands of the United States a route for a navigable canal connecting the Illinois River with Lake Michigan, and between that date and 1854, Congress had granted to the State 321,760 acres of land to assist in its construction. The canal was first opened to navigation in 1848, its cost up to that time being $6,409,509.95; since then the State has spent a great deal towards its enlargement and maintenance. In the meantime several surveys, having in view the improvement of the Illinois River, have been made, the first in 1838 by Capt. Howard Stansbury, Topographical Engineers; the next of any considerable

importance was made under the direction of General J. H. Wilson, in 1866, the object of which was 'to obtain such specific and accurate information in regard to obstructions to navigation in that river as will enable you to submit estimates for its improvement, so that the largest boats navigating the Illinois and Michigan Canal, and steamboats drawing four feet of water, will be enabled to pass through the river to St. Louis during the season of extreme low water without breaking cargo.'

His report on this survey led Congress to direct a more complete survey in 1867 (act approved March 2), the object of which was to prepare plans and estimates 'for a system of navigation by way of the Illinois River, between the Mississippi and Lake Michigan, adapted to *military, naval,* and *commercial* purposes.' This duty was committed to a Board of Engineers composed of General J. H. Wilson and Mr. William Gooding, Civil Engineer, the latter having been for a long time the Chief Engineer of the 'Illinois and Michigan Canal.' The report of this board was submitted to the Chief of Engineers under date of December 17, 1867, and is published in his annual report for 1868, pages 438 to 468. It recommended that the Illinois River be improved by the construction of five locks and dams, creating thereby a slack water system with a navigable depth of 7 feet at the lowest stage, from the mouth of the river at Grafton to Utica, 227 miles above; the lock chambers were to be 350 feet long, 75 feet wide, and the estimated cost of the entire work was $1,953,600. To complete the through line to Lake Michigan, an enlargement of the canal was recommended, the estimated cost of this enlargement being, in round numbers, $16,250,000.

No appropriations were made by Congress to carry out the plan of improvement above indicated, but the State of Illinois, in substantial conformity with that plan, has constructed *two* of the proposed locks and dams (viz., at Henry and Copperas Creek), at a cost of $747,747, while the annual appropriations by Congress for improving the Illinois River (aggregating to date $589,150) have been applied mainly to ameliorating its navigable con-

dition by dredging channels through the worst bars, and constructing dikes and wing-dams for contracting the waterway. For a more detailed description of these operations I would respectfully refer to my report dated August 30, 1878 (which was published as House Ex. Doc. No. 81, 45th Congress, 3rd Session), a copy of which is transmitted herewith.

The several surveys and reports above referred to gives so complete a description of the physical characteristics of the route, and present the arguments in favor of its improvement so forcibly, that it seems unnecessary to extend this report by repeating what has been so fully set forth before * * *.

* * * * * *

The laws of Congress require that reports of surveys of rivers and harbors shall contain 'statements of all existing facts tending to show to what extent the general commerce of the country will be promoted by the several works of improvements contemplated by such examinations and surveys. In fulfillment of this requirement it seems only necessary to note that the improvement of the Illinois River, supplemented by the enlargement of the Illinois and Michigan Canal as heretofore proposed, will furnish a reliable and commodious channel of water communication from the Mississippi River to the Northwestern lakes; by this means the vast Mississippi Valley, and all the country tributary thereto, is brought into direct water communication with Lake Michigan, at the great City of Chicago, with its flood of commerce eastward and westward; the route exists as a practicable one of considerable importance today, and the question is simply one of enhancing its value by increasing its capacity to a degree commensurate with the important interests involved.

* * * * * *

Considering this simple statement, the facts so fully set forth in previous elaborate reports, and noting the wonderfully rapid development of the entire western country, it would seem that nothing further is necessary to indicate 'to what extent the general commerce of the country will be promoted' by the contemplated improvement, nor to show how

desirable it is that the work should be accomplished with the least delay practicable."

In 1881, the General Assembly of Illinois authorized the City of Chicago to install pumps at Bridgeport, the northern terminus of the Illinois and Michigan Canal. These pumps were installed by the City of Chicago about the year 1884, and thereby a larger quantity of water was taken from the West Fork of the South Branch of the Chicago River into and through said Illinois and Michigan Canal.

(d) The agitation for the enlargement of the waterway from Lake Michigan to the Illinois River continued; the necessity therefor was recognized by officials of the State and Federal Government; and, further, during the decade beginning with 1880, there was a great demand for not only the enlargement of the waterway from Lake Michigan to the Illinois River, whereby a sufficient quantity of water would be withdrawn from Lake Michigan to provide a never-failing supply of water in the Illinois River, but also for the enlargement and deepening of the Mississippi River to the Gulf of Mexico, and organizations called "Deep Waterway Associations" were formed to further this project. The interest of the United States Government in the project is shown by the Acts of Congress and by reports of the Engineer Corps, transmitted to Congress. Major Benyaurd made two reports upon this subject—one dated September 2, 1882, and the other dated March 5, 1884, respectively, and Major Handbury, in 1887, pursuant to the Rivers and Harbors Act of August 5, 1886, made a report upon the same subject. Among other things, the said report of Major Handbury stated:

"The United States and the State of Illinois have long been committed to the project of opening a water communication between the Mississippi River

and the northern lakes of capacity sufficient for the wants of commerce and for the exigencies of our national defense, should these ever arise.

* * * * *

The distance by this route from the Gulf of Mexico to the southern end of Lake Michigan is about 1,620 miles. When the projected improvement of the Illinois River below Copperas Creek, on which we are now working, has been finished, more than 1,520 miles of this distance will be available for the water transportation of commerce in bulk between these points. Pushing this improvement through to the lake, the connecting link will be formed which will join the northern lakes with the vast network of navigable rivers whose waters flow commensurate with the importance of the commerce that will be affected by it. The mere fact that such a route is available will serve as a wholesome regulator to the rates that would be exacted by other methods of transportation were this one not in existence. Besides the immense commercial advantages that may be expected from the completion of the project, there are military and naval exigencies that might easily arise where it would figure as a prominent factor in the problem of our national defenses. From whatever point we look at the subject there is nothing local or sectional in it. It is true that all the work to be done happens to be in the State of Illinois. The benefits to be derived belong to the nation at large. It is fortunate, too, that at this time the subject is unencumbered by any phase of a political character. The problem of connecting Lake Michigan with the Mississippi River by a commodious waterway, that could be used for commercial, military and naval purposes, has received attention from our most thoughtful statesmen from the day of Albert Gallatin to the present."

During the said decade beginning with the year 1880, the population of the City of Chicago and its adjoining suburbs had increased to approximately 1,000,000 people. While the Chicago River and its branches into which principally the sewage of Chicago was emptied, had been, since

the enlargement of the Illinois and Michigan Canal upon the deep cut plan, to some extent cleansed by reason of said reversal of the Chicago River during dry weather times, nevertheless, the principal amount of the drainage of Chicago, including its sewage, found its way into Lake Michigan, which was the only drinking water supply for the people of Chicago. About the year 1885 a very extraordinary and extensive rain occurred during which, in a short time, a vast amount of water was delivered to the Chicago River from its drainage area, carrying into the lake and to the water supply an unusual amount of the accumulated sewage and filth deposited in the river. While on the occasion of rains a certain amount of the sewage and filth was washed into the lake from the river, by reason of the fact that the Illinois and Michigan Canal was not of sufficient capacity to keep the Chicago River at all times reversed in its flow, this flood of 1885 caused an extraordinary large number of deaths from water-borne diseases—such as typhoid, and others—causing the people of Chicago and Illinois to be greatly alarmed.

The agitation and demand for a deep waterway to the Gulf and the health conditions at Chicago caused the City Council of Chicago, pursuant to an ordinance passed on January 27, 1886, to appoint a commission known as "The Drainage and Water Supply Commission," composed of the most eminent engineers of the United States, to make investigations and surveys and to report upon the best method of solving the waterway and water supply problems. The members of said Drainage and Water Supply Commission, after making complete investigation and survey, made a report to the City Council on January 30, 1887. The said report reviewed the conditions then existing as to drainage and water supply and

the demands and the necessities for the enlargement of the waterway from Lake Michigan to the Mississippi River. An estimate was made by the said committee, as stated in its report, of the future population of Chicago and its environs. The said commission also considered, as shown by said report, the adaptation of the various then known means of disposing of sewage—among others, discharging the sewage into Lake Michigan at one end of the city and taking water from the lake at the other for drinking purposes, the disposal of the sewage on land and the diversion of the sewage and drainage to the Desplaines River by way of a canal, which would serve the purpose of providing a deep waterway from the West Fork of the South Branch of the Chicago River to the Desplaines River at or near Joliet, and the use of the water from Lake Michigan to provide a never-failing water supply for navigation on the Illinois River and for the purpose of oxidizing the sewage and drainage so that such sewage and drainage, when passing through the Desplaines and Illinois Rivers, would not be injurious to the health of the people residing along the said rivers or to fish life therein. The commission recommended the diversion method mentioned as stated in its report as follows:

> "Besides the economical advantages of the Desplaines scheme, its superiority is still further emphasized by advantages of another kind. The proposed canal will, from its necessary dimensions and its regular discharge, produce a magnificent waterway between Chicago and the Mississippi River, suitable for navigation of boats having as much as 2,000 tons burden. It will establish an available water power between Lockport and Marseilles fully twice as large as that of the Mississippi River at Minneapolis, which will be of great commercial value to the State. The Calumet region will be much enhanced in value by having a direct navigable chan-

nel to the Desplaines River and by a lowering of the flood heights of Calumet Lake and River. Within the city the water of the Chicago River and its South Branch will get a much better circulation if it flows by gravity than if it has to be pumped, the necessity for which would remain even if the sewage should be discharged through intercepting sewers, either into the lake or upon land. Upon either of the latter conditions an occasional overflow from the sewers into the river during heavy rains would be more objectionable than a constant discharge of sewage into a more rapidly flowing stream. Flood waters entering the lake by way of the Chicago River would carry into it much filthy matter, either suspended or deposited, notwithstanding the existence of intercepting sewers, but the proposed diversion of such waters before reaching the populated districts will for all time obviate this undesirable occurrence. Lowering the level of the North Branch at Bowmanville by its diversion to the lake will be equivalent to raising the low prairie extending towards Evanston and Niles and greatly benefit parts of these towns.

THE WATER SUPPLY.

In reaching the conclusion that the sewage of the city should be discharged into the Mississippi Valley the question of water supply is materially simplified, because the lake will then at all times furnish good water wherever intakes are desired for an extension of the works."

The subject-matter of the said report of the Drainage and Water Supply Commission of Chicago, above mentioned, was considered by the General Assembly of Illinois at its session held during the year 1887, but no act was passed. Instead, a committee of the House and Senate was appointed to make further investigations of the subject *ad interim* and to make a report to the 1889 session of the General Assembly. In the meantime, the agitation and demand for a deep waterway to

the Gulf of Mexico of a depth not less than 14 feet, depths of 20 to 24 feet being proposed, increased, so that Congress provided in the Rivers and Harbors Act of August 11, 1888, for an engineering survey and report, as follows:

> "And for the purpose of securing a continuous navigable waterway between Lake Michigan and the Mississippi River, having capacity and facilities adequate for the passage of the largest Mississippi River steamboats, and of naval vessels suitable for defense in time of war, the Secretary of War is authorized and directed to cause to be made the proper surveys, plans, and estimates for a channel improvement and locks and dams in the beds of the Illinois and Desplaines rivers from LaSalle to Lockport, so as to provide a navigable waterway, not less than one hundred and sixty feet wide, and not less than fourteen feet deep, and to have surveyed and located a channel from Lockport to Lake Michigan, at or near the City of Chicago, such channel to be suitable for the purposes aforesaid; the necessary expenses of such surveys, estimates, plans and location to be paid out of the sum herein appropriated for the improvement of the Illinois River."

Thereafter, and in line with the general plan and program of the defendant, the State of Illinois, and the United States, to enlarge and complete the said Lakes-to-the-Gulf Waterway, the Act of May 29, 1889, was passed, providing for the creation of the defendant District and specifically providing that the canal to be constructed under and pursuant to the act should be of such dimensions and capacity to allow the passage along it of the largest boats, not only then navigating the Great Lakes, but such boats as would probably be used upon the Great Lakes in the future. And the said act provided also for the passage through the said canal from Lake Michigan of a sufficient quantity of water to pro-

vide a never-failing water supply for navigation. The said act also provided for the removal of dams constructed by the State in the Illinois River, intending thus to free the Illinois River of such obstructions and to provide free river navigation. The said act substantially carried out the recommendations of the said Drainage and Water Supply Commission concerning navigation between Lake Michigan and the Mississippi River, and relating the protection of the water supply for the people of Chicago. In providing for the construction of said works, the Drainage and Water Supply Commission, the committee above mentioned appointed by the Legislature to investigate and sit *ad interim* as above mentioned, and the General Assembly of Illinois, intended that the works to be constructed for navigation and incidentally to furnish an outlet for the drainage and sewage arising at Chicago, should be of sufficient extent and size to take care of the conditions that might arise in the future.

At the time of the passage of said Act of 1889 making provision for the construction of said works, the General Assembly of Illinois understood that it was acting in pursuance of the Acts of Congress of March 30, 1822, and March 2, 1827, aforesaid, and the various other acts of Congress above mentioned, providing for surveys and reports upon the building of a deep waterway from Chicago to the Gulf of Mexico. At that time and for a great number of years thereafter, the sewage and drainage of metropolitan populations in the United States were disposed of by discharging the same into rivers and streams, wherein the sewage and drainage would be oxidized and purified by what is known as the dilution method of sewage disposal, and no other method was then known or used which could be adapted to the conditions at Chicago.

The said waterway policy of the State of Illinois, then immediately to be carried out under the said Act of May 29, 1889, and future then contemplated legislation, is indicated by the joint legislation of the House and Senate of said defendant State of Illinois, passed on May 28, 1889.

Among other things, the said resolution stated:

> "That it is the policy of the State of Illinois to procure the construction of a waterway of the greatest practicable depth and usefulness for navigation from Lake Michigan via the Desplaines and Illinois Rivers to the Mississippi River. • • • That the United States is requested to aid in the construction of a channel not less than 160 feet wide and 22 feet deep with such a grade as to give a velocity of 3 miles per hour from Lake Michigan at Chicago to Lake Joliet, a pool of the Desplaines River, immediately below Joliet, and to project a channel of similar capacity and not less than 14 feet deep from Lake Joliet to LaSalle, all to be designed in such manner as to permit future development to a greater capacity."

(e) Immediately after the passage of said Act of 1889, the Sanitary District of Chicago was organized by vote of the people, and defendant District continued and completed the surveys for the Main Channel, known as the Sanitary and Ship Canal, extending parallel to and but a short distance from the Illinois and Michigan Canal from the West Fork of the South Branch of the Chicago River, twenty-eight miles, to Lockport, and construction of said canal was immediately commenced, and it was finally completed about the year 1898 with a depth of 24 feet, 160 feet wide in its rock sections and approximately 225 feet in width at the top in the earth sections, and the declivity was such that it was capable of passing through it pursuant to the express provisions of Section 23 of said Act of May 29, 1889, a maximum of 600,000 cubic

feet of water per minute, or 10,000 cubic feet per second. Said volume of water was the amount then considered necessary and required for the construction and development of a deep waterway of the depths contemplated through and along the Desplaines and Illinois Rivers to the Mississippi River. The said volume of water is the amount now required for the Illinois Waterway now under construction and hereinafter more particularly mentioned. It was also contemplated that the said volume of water so to pass through said Sanitary and Ship Canal, would reverse at all times the flow of the Chicago River, thus preventing pollution of the water supply of the people of Chicago. At the time the said Sanitary and Ship Canal was laid out and projected, at the time of the passage of the said Act of May 29, 1889, and at the time the construction work on said canal was commenced, it was contemplated and provided that the Chicago River, the South Branch and the West Fork thereof to the northern terminus of said Sanitary and Ship Canal, should be so deepened and widened that the necessary water could pass through same without creating a current injurious to navigation, and of a depth sufficient to accommodate vessels capable of navigating the Great Lakes and the said Sanitary and Ship Canal when constructed. Such intention to so improve the Chicago River and its branches mentioned, and the project therefor, was shown by resolution of the Board of Trustees of defendant district passed April 21, 1891, a copy of which was sent to the Secretary of War and the Congress of the United States. Pursuant to said resolution and other ordinances of said district and the authority of the United States and the State of Illinois, the said Chicago River, its South Branch and West Fork to the northern terminus of said Sanitary and Ship Canal, was deepened from 17 to 26 feet, widened at all

points to 200 feet, obstructive center pier bridges were replaced with modern bascule type of bridges, also the bridges over the said Sanitary Ship Canal were built so that they could be moved or swung to permit the free passage of boats, the cost of enlarging Chicago River and its said branches being approximately $13,000,000. During the construction of said Sanitary and Ship Canal, the Congress of the United States was informed, each year, through the Chief of Engineer's reports of the progress of its construction.

Defendant District deepened and widened the South Branch of the Chicago River and the West Fork thereof to the northern terminus of the Sanitary and Ship Canal, as above mentioned. The United States, pursuant to various acts of Congress passed beginning with the year 1892, deepened and widened the Chicago River proper to connect with the said improvement of the South Branch and said West Fork made, and then being carried out by the defendant District. Plans and specifications for the enlargement of said South Branch of the Chicago River were submitted to and approved by the Chief of Engineers and the Secretary of War, and permits were from time to time issued by said Chief of Engineers and Secretary of War authorizing said enlargement and improvement of said river.

May 8, 1899, the Secretary of War, by permit, authorized the opening of said canal and the withdrawal of water through it to its capacity, subject only to limitation of the volume of water in the event a current should be created in the Chicago River, the South Branch and West Fork, unreasonably obstructive to navigation thereon.

Thereupon, pursuant to said permit of May 8, 1899,

defendant District, on January 17, 1900, placed in operation the Sanitary and Ship Canal.

At the southern terminus of said Sanitary and Ship Canal, locks have been constructed connecting it with the Illinois and Michigan Canal and with the Illinois Waterway now under construction, and the said Sanitary and Ship Canal has taken the place for navigation of the old Illinois and Michigan Canal between the West Fork of the South Branch and the southern terminus of said Sanitary and Ship Canal. Since the issuance of said permit of May 8, 1899, and the opening of said Sanitary and Ship Canal, appellant District has expended upwards of fifty million dollars in and about the deepening and widening of the South Branch and West Fork of the South Branch of the Chicago River and in the construction and completion of intercepting sewers, pumping stations and diversion works supplementary to the Sanitary and Ship Canal, and in the construction of sewage purification and treatment works used in connection with the maintenance of said waterway.

The enlargement of the said South Branch of the Chicago River and the West Fork thereof, as made by defendant district and the enlargement of the Chicago River as made by the United States, has been such that the volume of water authorized by said permit of the Secretary of War of March 3, 1925, may be withdrawn from Lake Michigan through said river channels without creating a current in said rivers, interfering with navigation or objectionable to the Chief of Engineers and the Secretary of War.

(f) During the years beginning with the year 1899 when the said Sanitary and Ship Canal was completed, up to almost the present time, the Congress of the United States had passed many acts providing for surveys and

reports to be made, and such surveys and reports have been made in relation to a deep waterway from the Great Lakes to the Gulf of Mexico, which waterway, according to those surveys and in accordance with the directions expressly provided by acts of Congress, was to be built with the diversion from Lake Michigan to be used in its operation of at least the amount authorized by said permit of March 3, 1925, and also Congress provided for surveys and reports to be made, and such surveys and reports were made with reference to the construction of what are known as compensatory or regulatory works to be built at the outlets of various lakes for the purpose not only of offsetting for the theoretical effect of the diversion at Chicago, but also for the effect of diversions from Lake Erie by way of the Welland Canal, New York Barge Canal and for power purposes at Niagara Falls.

All the reports made under all the said acts of Congress relating to the construction of compensating or regulating works, which reports were transmitted to Congress, find that the supposed lowering of the water surfaces of the Great Lakes system due to the said diversions, may be compensated for or offset by the construction of either fixed weirs or movable dams at the outlets of Lakes Huron, Erie and Ontario, and recommended that such works be installed. Defendant District a number of years ago offered to defray such expense to offset or compensate for the diversion at Chicago, and in accordance with the condition of said permit of March 3, 1925, it has posted a guarantee of a million dollars with the Secretary of War, as heretofore alleged. The use of the said diversion at Chicago is required for the efficient and proper regulation of the levels of Lakes Michigan-Huron, Lakes St. Clair and Erie for the benefit of navigation upon said Great Lakes and their connecting waters, that is to say, in order that the out-flow of the

said lakes at or above Niagara Falls may be regulated so that the lake surfaces will not be as low or as high as they would be in a state of nature, it is necessary that the natural outlets of said lakes be enlarged, which is accomplished by the maintenance of the said diversion at Chicago.

The treaty of January 11, 1909, between the United States and Great Britain relating to Canadian boundary waters, provides that jurisdiction as to the diversions of water from Lake Michigan is reserved to the United States and the various states; that the treaty should have no effect upon diversions from said lake then existing; that the order of precedence of the uses of boundary waters should be:

(1) Uses for domestic and sanitary purposes;
(2) Uses for navigation, including service of canal for purpose of navigation;
(3) Uses for power and irrigation purposes.

34.

These defendants, further answering, say:

The construction of the said Sanitary and Ship Canal at the time it was projected and being constructed, was known as a great engineering feat, and when said canal was constructed it was the largest artificial canal in the world. The fact that said canal was to be and was being constructed, was known to the people and officials of the complainant state and to the people of the United States generally. Likewise was known to the same people and persons the purpose of the construction of said canal, namely, as the important link in the deep waterway to the Gulf of Mexico, furnishing by its operation water from Lake Michigan ultimately to its capacity, 10,000 cubic second feet, for the purpose of providing a water supply for the Illinois River and for

the operation of the proposed enlarged waterway. The acts of Congress and the surveys and reports made thereunder with reference to the use of the Sanitary and Ship Canal and the water diverted by it for navigation and for sanitary purposes, were likewise known to the complainant. Yet the said complainant, until the filing of the bill of complaint herein, made no protest or complaint nor instituted any suit with reference to the construction of said Sanitary and Ship Canal and its supplementary works, and permitted the defendant District to expend upwards of ninety millions of dollars in the construction of said works without any objection from said complainant. And the said complainant has long acquiesced in the carrying out by these defendants of the plan and program herein mentioned for the construction of said waterway, and in the use of the waters to be diverted for navigation and for sanitary purposes, and is therefore estopped from obtaining any of the relief sought by said amended bill.

Wherefore, these defendants move that this suit be dismissed because of the laches, acquiescence and estoppel above alleged.

35.

These defendants aver that pursuant to said Acts of Congress hereinabove mentioned, and to said waterway policy of the State of Illinois as expressed by resolutions and acts of its General Assembly, said General Assembly passed an Act entitled:

> "An Act in relation to the construction, operation and maintenance of a deep waterway from the water power plant of The Sanitary District of Chicago at or near Lockport, Illinois, to a point in the Illinois River at or near Utica, and for the development and utilization of the water power thereof;" approved June 17, 1919; in force July 1, 1919.

that under said Act the waterway to be constructed is to be known and called "The Illinois Waterway"; that said Act provided for the route of the said waterway, as stated in the title thereof, from the southern terminus of the Main Channel of the Sanitary District of Chicago at or near Lockport along the Desplaines and the Illinois Rivers to Utica on said latter named river; that the channel of the waterway is to be according to said Act not less than 150 feet bottom width and the minimum depth not less that 8 feet in the earth sections and 10 feet in the rock sections; that the minimum depth over mitre sills not less that 14 feet and minimum width of locks is to be not less that 110 feet with minimum length not less than 600 feet usable length; that the purpose of making the depth over mitre sills not less than the depth provided and the length and width of the locks as stated, was to permit of the enlargement of said waterway to a 14 foot depth; that the diversion of water from Lake Michigan to the amount provided for by said permit of March 3, 1925, is necessary for the operation of said waterway not only at the said depth of 14 feet, but also at the depth of 9 feet, which will be provided by the excavation for said waterway now being carried on; that said diversion to said amount will permit of the extension of said waterway from Utica on said Illinois River to its mouth, and thence along the Mississippi River to Cairo, Illinois, by the United States Government or by said State of Illinois, in conjunction with said Illinois Waterway construction and said diversion to the amount of said permit is necessary for the construction and operation of said waterway through said Illinois River to the Mississippi River; that in addition, the use of said waters so diverted will permit of the removal of the state dams at Henry and Copperas Creek on the Illinois River and the government dams at Kampsville and La-Grange on the Illinois River, thus permitting navigation

on said Illinois River from Utica to its mouth, to be free and unobstructed by locks or dams.

The plans of the State of Illinois for the construction of said Illinois Waterway from the southern terminus of the Sanitary and Ship Canal to the Illinois River at or near LaSalle, Illinois, have been approved by the Chief of Engineers and the Secretary of War, and permits for such construction have been issued by the Secretary of War. The defendant State of Illinois has, pursuant to amendment to its constitution and acts passed thereunder, issued the necessary bonds for the construction of said Illinois Waterway and has in such construction work built certain of the locks of the dimensions above described and has performed a vast amount of other work necessary for the construction of said waterway, and has at this time expended in the construction of said waterway, upwards of $3,000,000.

The said defendant State of Illinois has in the construction of said Illinois Waterway and the expenditure of said moneys therefor, constructed and completed the lock located at Marseilles, Illinois, in the Illinois River, of the dimensions above specified. The said lock provided to be built as above stated at the southern terminus of the Sanitary and Ship Canal to connect with the Illinois Waterway in the Desplaines River, is now 60 per cent completed, and will be entirely completed within the year 1926. Bids have been invited to be received January 6, 1926, for the letting of the contracts for the construction of the dam and lock at Starved Rock, in the Illinois River, of the size and dimensions above described, and the construction of retaining walls in the Desplaines River through the City of Joliet required to be built to carry out said plans for the construction of said Illinois Waterway. The remaining two dams, one at the mouth of the Desplaines River and the other at Brandon's Road

Bridge, just south of the City of Joliet, across the Desplaines River, and each of the locks connected with the respective dams, will be placed under construction during the year 1926—all with the approval of and by the authority of, the United States.

36.

These defendants further answering say:

Upwards of forty years ago the defendant State of Illinois constructed two dams with locks in the Illinois River in the reaches of said river immediately south of La Salle, Illinois. One of said dams with its locks was constructed at Henry and the other at Copperas Creek, Illinois. The United States constructed two dams with locks in the lower reaches of the said Illinois River. One of said dams with its lock is located at Kampsville, and the other one is located with its lock at La Grange, Illinois. The United States and the said State of Illinois in constructing said dams, sought thereby to improve navigation in said Illinois River below La Salle, Illinois, for the purpose of enabling the maintenance by the United States and State of Illinois of at least seven feet in depth of water at all points in said river. About the same time, the United States constructed what is known as the Hennepin Canal, extending from the Illinois River at or near Bureau, to Rock Island, Illinois. The project depth of water in said canal for navigation was and is seven feet. Since the construction of the said Sanitary and Ship Canal and the placing of the same in operation, with its diversion of water from Lake Michigan, the said United States and the said defendant State of Illinois, have sought to provide and to so improve navigable conditions upon said Illinois River below La Salle, Illinois, that navigation could be carried on on said river to its

mouth without the use of the said dams and locks therein built as aforesaid. The addition to the Illinois River of the amount of water authorized by said permit of March 3, 1925, increases to a number of feet the depths of water in said river for the purposes of navigation, and said water insures better and greater depths for navigation. The said volume of water provided by said permit added to the said Illinois River, increases from three to five feet for navigation purposes the low water depths at the critical points of navigation or where the water is ordinarily shallow. During practically all of each year when navigation is carried on upon the Illinois River, the said additional water authorized by said permit makes it possible for boats navigating the said river to pass over said dams without being required to consume the time necessary in passing through the locks adjacent to said dams. Thereby navigation is greatly facilitated. The addition of said volume of water has made it possible and will make it possibe to maintain said project depths in said Illinois River without the expenditure of the amount of money for dredging that would be required if said volume of water authorized by said permit were not in said river, and said water is now required to maintain navigation upon said Illinois River and to maintain the depths fixed by Congress for such navigation on said river. The said volume of water provided by said permit added to the Mississippi River below the mouth of said Illinois River, materially increases the navigable depths of water in said river, and insures and makes more easy the maintenance of the project depths fixed by the Congress of the United States for navigation in said river. From the mouth of the said Illinois River to Cairo, Illinois, the low water depths in said Mississippi River are increased and will be increased thereby at low water times upwards of one

foot, and in greater amounts at certain so-called critical points of navigation. The said volume of water also increases the depths for navigation in said Mississippi River at various points below Cairo, Illinois.

The natural run-off of the drainage area of the said Illinois River produces, when delivered to said Illinois River, variable volumes of water. At times the volume of water flowing in said Illinois River in a state of nature, did not exceed 500 cubic feet per second, and at times it has been known to be higher than 100,000 cubic feet per second. To maintain depths for navigation and insure such depths to persons navigating said Illinois River, it is necessary and required that a volume of water such as the amount authorized by said permit of the Secretary of War be added to the natural and ordinary flow in said river for and in the interest of navigation and interstate commerce. The said volume of water added when the run-off is great is but a small percentage of the total amount, but when the run-off is slight, said added volume from Lake Michigan provides better and greater depths for navigation than would exist if said volume of water were not turned into said Illinois River.

The addition of said volume of water, authorized by said permit, to the Desplaines River, also increases by upwards of one foot and a half, the project depth of water in said Illinois Waterway now under construction between the southern terminus of the Sanitary and Ship Canal to the Illinois River at La Salle, Illinois. It will not be practicable or feasible to construct and maintain a waterway from the southern terminus of the Sanitary and Ship Canal to the mouth of the Illinois River of nine feet depth to connect with waterways of similar depth in the Ohio River and in the Mississippi River, without the use of substantially the volume of water authorized by said permit of March 3, 1925.

The amount of water authorized by said permit of March 3, 1925, improves and facilitates navigation and makes navigation more convenient upon the said waterway extending from Lake Michigan on the Chicago River, its South Branch and the West Fork of its South Branch, on the Sanitary and Ship Canal, on the Illinois and Michigan Canal and therefrom upon the Illinois River to the Mississippi River, and upon the Mississippi River substantially to its mouth.

37.

These defendants aver that in addition to the sewage and drainage of Chicago and its environs, being that arising within the limits of the territory of the defendant Sanitary District, there are many cities, towns and villages located upon the Desplaines and Illinois Rivers, such as Joliet, Morris, Ottawa, La Salle, Peru, Bureau, Peoria, Pekin and Beardstown, and many others whose sewage, drainage and wastes are discharged into said Desplaines and Illinois Rivers; that the volume of water authorized to be withdrawn, and under the conditions imposed, by said permit of March 3, 1925, is necessary and required for said Desplaines and Illinois Rivers, in order that the sewage, drainage and wastes now being discharged into said rivers, may be oxidized and diluted so that the said Illinois River may thereby be maintained in such condition that navigation may be carried on thereon conveniently and without injury to the health of the persons so navigating said river, and that fish life may be preserved in said river, and that the health of people residing along said rivers may not be injured; that the withdrawal of said water, in the amount and under the conditions provided by said permit, is required in order that navigation may be carried on upon the Chicago River, its North Branch, South Branch and

West Fork, and on the Sanitary and Ship Canal, without inconvenience or injury to the health of persons navigating same; that if the said volume of water were not withdrawn from Lake Michigan, or if an amount materially less than said volume were so withdrawn the said Chicago River, its North Branch, South Branch, West Fork, the Sanitary and Ship Canal, the Illinois and Michigan Canal, the Desplaines River and the Illinois River would be in such condition that noisome and disagreeable odors would arise therefrom, disease breeding conditions would exist, the health of people residing along same would be injured and navigation thereon could not be carried on with any convenience, if at all, and fish life in said Illinois River would be absolutely destroyed; that, furthermore, at times the Chicago River would flow into Lake Michigan, carrying with it its sewage and drainage pollution, polluting Lake Michigan, injuring navigation thereon and injuring the health of the people using Lake Michigan for a water supply; that within the period of said permit, to-wit, December 31, 1929, it would be impossible for the people residing within the limits of the defendant District or the people residing along the said Desplaines and Illinois Rivers, to so artificially treat or purify the sewage arising from said cities, towns and villages, that there would not be required to be withdrawn from Lake Michigan to the said Desplaines and Illinois Rivers substantially the amount fixed by said permit.

38.

These defendants aver that in issuing the said permit of March 3, 1925, the Secretary of War was acting pursuant to the authority granted by the Rivers and Harbors Act of March 3, 1899, in the regulation of interstate commerce and that the said Secretary's action in issuing

said permit was pursuant to said act and was connected with the regulation of interstate commerce.

39.

Defendants further aver:

(a) The facilities for navigation in the ports and harbors along complainant's shores have been provided by the United States under improvement projects specified by various Acts of Congress. The depth of water in all such harbors has been increased from time to time under said improvement projects, so that the project depth now maintained by the United States in each and every of said harbors is many feet greater than the original depth, and such improvements in facilities of navigation, including width of channels, safety of entrance to harbors, depth of harbor basins and channels were all made solely and only at the expense of the United States, to which the complainant or any of its people have not directly contributed. The said facilities for navigation in the various forms mentioned have been provided by the United States to suit the demands of commerce in said harbors. Each and every one of said harbors has been improved in some of the various ways mentioned since said Sanitary and Ship Canal was opened. The United States, in making said improvements, determined the project depths for each of said harbors, and took into consideration, in so doing, effects upon the surface elevation of the water of Lake Michigan, if any there were or should be due to diversions of water for all purposes, at all points.

(b) The United States about the year 1894 provided for and caused the installation of certain works at the outlet of Lake Superior, whereby the out flow through the St. Mary's River has been controlled, and said out

flow has at times been greatly diminished, thus causing a decrease in the supply of water to Lakes Michigan, Huron, Erie and Ontario. The United States has and has assumed jurisdiction of navigation and of the facilities for navigation upon the entire Great Lakes system by the various works and improvements that it has constructed, including said controlling works at the outlet of Lake Superior, and also by the improvement of the channels connecting the different ones of the Great Lakes.

The Canadian Government with the consent of the United States, constructed at the Galops Rapids a dam known as the Gut Dam, whereby one of the channels of the St. Lawrence River was entirely cut off, thus causing the raising of the surface elevation of Lake Ontario to an amount greater than the claimed lowering of the surface elevation of said lake due to the diversion of water at Chicago. Said dam was constructed about the year 1903.

The United States, in providing a complete system for navigation upon all of the Great Lakes, including their harbors and conecting channels, in addition to the matters above stated, has deepened at various points the St. Clair River, Lake St. Clair and the Detroit River, whereby the surface elevations of the waters of Lakes Michigan and Huron have been lowered upwards of one foot, that is, the surface elevation of the water of said lakes is upwards of one foot lower than it would have been had such improvements not been made, and to a certain extent thereby, the surface elevation of the waters of Lake Erie has been increased, and the United States has, in the interest of navigation, further permitted diversions from Lake Erie by way of the Welland Canal, to the extent of approximately 4.500 cubic second feet and from Lake Erie for the operation of the New York Barge Canal, of approxi-

mately 1,500 cubic second feet. The United States has permitted the use of waters at Niagara Falls for power purposes. The said uses of the waters of Lake Erie for navigation and power purposes mentioned, have decreased the ordinary surface elevation of Lake Erie an amount almost equal to the claimed effect of the Chicago diversion upon Lake Erie. In making the said improvements in navigation upon the Great Lakes system, the United States has changed, as above set forth, the ordinary and natural flow of rivers connecting said lakes, and thereby the ordinary surface elevations of the said lakes. The United States has expended upwards of one hundred and six million dollars in making said improvements and providing said system of navigation upon said Great Lakes, their harbors and connecting channels, and has assumed exclusive jurisdiction and control of navigation upon said Great Lakes and the harbors located thereon, including each and every of the harbors mentioned in said amended bill.

(c) As heretofore alleged, the United States has assumed jurisdiction in this matter and has provided for the building of compensating or regulatory works to offset, and compensate for, any such diversion, by inserting in the permit of March 3, 1925, a requirement that the defendant Sanitary District should file a bond for the cost of such regulating works and the defendant Sanitary District, has, as heretofore set out, executed and filed said bond in accordance with said permit, so that upon the completion of such regulating and controlling works there will be no lowering of the levels of said lakes, because of any diversion therefrom.

(d) The United States, in its control and regulation of all the navigable waters of the United States and in its improvement and maintenance and/or creation of the inland waterway system of the United States, connecting

by water transport and waterways the various watersheds, regions and parts of the country with each other, has exercised and is exercising complete and full control of the Great Lakes waterway, and of the system of waterways represented by the Mississippi River and its tributaries to the Gulf of Mexico and of the connection between said two systems of waterways by means of the Chicago River, the Sanitary and Ship Canal and Illinois and Michigan Canal to the Illinois River. And the United States, in such connection, has adopted said Sanitary and Ship Canal with its attendant diversion of water from Lake Michigan, as a part of said inland waterway system, and has recognized, approved and adopted each and every of the acts of defendants complained of.

40.

Defendants, and each of them, move to dismiss the bill of complaint filed herein for the following reasons (some of which have been hereinbefore stated):

(a) The case is not one justiciable in this court;

(b) The subject-matter set forth in the bill of complaint is within the exclusive jurisdiction of the United States assumed and being exercised;

(c) The permit of March 3, 1925, is valid and constitutes complete authorization for the diversion complained of, and the permit regulates and controls the amount and conditions of such diversion;

(d) The United States is a necessary and indispensable party to this suit;

(e) The subject-matter set forth in said bill of complaint is exclusivelly within the jurisdiction of the political department of the Government;

(f) Complainant is barred of any action by its laches

and acquiescence and it is estopped from obtaining the relief prayed.

41.

These defendants deny that the complainant is entitled to the relief, or any part thereof, as in said bill of complaint demanded, and these defendants state that said bill of complaint is inadequate and insufficient in law and does not on its face entitle the said complainant to the relief, or any part thereof, prayed for in and by said bill of complaint; and these defendants furthermore move that the bill of complaint be dismissed; and these defendants, as to each and every allegation of said bill of complaint not herein admitted, answered or specifically denied, hereby expressly deny the same; and these defendants pray the same advantage in this answer as if they had pleaded or demurred to said bill of complaint, and pray that they be dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

THE STATE OF ILLINOIS,
By OSCAR E. CARLSTROM,
Attorney General,
CYRUS E. DIETZ and
HUGH S. JOHNSON,
Its Solicitors.

THE SANITARY DISTRICT OF CHICAGO,
By HECTOR A. BROUILLET,
Attorney,
MORTON S. CRESSY,
Assistant Attorney,
Its Solicitors.
Defendants.

O. T. 1925 ORIGINAL NOS. 8, 10 & 11,

Office Supreme Court, U. S.
FILED
JUN 1 1926
WM. R. STANSBURY
CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1925.

No. 7 Original, in Equity.

STATES OF WISCONSIN, OHIO, PENNSYLVANIA AND MINNESOTA,

Complainants,

vs.

STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,

Defendants,

and

THE STATES OF MISSOURI, KENTUCKY, TENNESSEE AND LOUISIANA,

Intervening Defendants.

ANSWER OF ILLINOIS TO AMENDED BILL OF COMPLAINT.

OSCAR E. CARLSTROM,
Attorney-General of Illinois.

CYRUS E. DIETZ,
HUGH S. JOHNSON,
Solicitors for Illinois.

BARNARD & MILLER PRINT, CHICAGO

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1925.

No. 16 Original, in Equity.

STATES OF WISCONSIN, OHIO, PENNSYLVANIA AND MINNESOTA,

Complainants,

vs.

STATE OF ILLINOIS AND THE SANITARY DISTRICT OF CHICAGO,

Defendants,

and

THE STATES OF MISSOURI, KENTUCKY, TENNESSEE AND LOUISIANA,

Intervening Defendants.

ANSWER OF ILLINOIS TO AMENDED BILL OF COMPLAINT.

This defendant, the State of Illinois, by Oscar E. Carlstrom, Attorney-General, and Cyrus E. Dietz and Hugh S. Johnson, its solicitors, reserving to itself all right of exception to, and herein and hereby renewing its motion to dismiss, the said amended bill of complaint, for answer thereunto says:

1. This defendant hereby joins in and adopts the answer of the defendant, the Sanitary District of Chicago, and the answer of the intervening defendants, Mis-

souri, Kentucky, Tennessee and Louisiana, heretofore filed herein (except such portions of Paragraphs Nineteen of said answers as aver that the lowering of the mean level of Lakes Michigan, Huron, Erie and Ontario, by reason of the diversion, as alleged in Paragraph Nineteen of said amended bill, does not and will not exceed four and three-fourths inches) and this defendant, in so joining in and adopting said answers, asks and prays the same benefit and advantage of the said answers as if the statements and averments therein contained, were herein fully and specifically set forth.

2. This defendant denies that as a result of the diversion of water from Lake Michigan, as averred in said amended bill of complaint, the mean level of the water in Lakes Michigan, Huron, Erie and Ontario and in the various waterways connecting said lakes and in the St. Lawrence River above tidewater has been lowered to any extent below the level that would exist in said lakes and waterways in the absence of such diversion.

3. This defendant, further answering and insisting upon the following as a distinct and separate matter of defense in bar of the said amended bill of complaint, says that, as is alleged and averred in the said answers, the United States, in its control and regulation of all the navigable waters of the United States and in its improvement and maintenance and/or creation of the inland waterway system of the United States, connecting by water transportation and waterways the various watersheds, regions and parts of the country, has exercised and is exercising complete and full control of the Great Lakes waterway and of the system of waterways represented by the Mississippi River and its tributaries to the Gulf of Mexico and of the connection between said two systems of waterways by means of the Chicago River,

the Sanitary and Ship Canal and Illinois and Michigan Canal to the Illinois River. And the United States, in such connection, has authorized and adopted said Sanitary and Ship Canal, with its attendant diversion of water from Lake Michigan, as a part of said inland waterway system, and has authorized, recognized, approved and adopted each and every of the acts of defendants, complained of in said amended bill.

4. This defendant, further answering and insisting upon the following as a distinct and separate matter of defense in bar of the said amended bill of complaint, says that, as is alleged and averred in the said answers, the said complainants and each of them, by reason of the several matters and things in the said answers set forth, have been guilty of laches and have acquiesced in all of the acts of the defendants complained of in, and that the said complainants and each of them, therefore, are estopped from obtaining any of the relief sought by, said amended bill.

And this defendant, further answering, denies that the complainants are entitled to the relief, or any part thereof, as in the said amended bill demanded, and prays that it may be hence dismissed with its reasonable costs and charges in this behalf most wrongfully sustained.

STATE OF ILLINOIS.
By Oscar E. Carlstrom,
Attorney-General.

Cyrus E. Dietz,
Hugh S. Johnson,
Solicitors for Illinois.